APRIL 10, 1924

# THE RUBBER AGE

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# THE RUBBER AGE

*The Only Twice-a-Month Rubber Publication*

VOL. XV. APRIL 10, 1924 No. 1


## U. S. PREDICTS 15% BALLOONS IN 1924

**In Statement U. S. Rubber Co. Urges Dealers to Consider that Motorists are Awaiting Final Developments and Lower Prices Before General Replacement.**

The tire dealer has a great deal to think about in connection with the advent of the balloon tire according to the United States Rubber Co. A new tire season is just about to begin and the tire dealer finds it necessary to do some quick, straight thinking, if he is to avoid serious complications for himself and his business.

Tire manufacturers know that the balloon tire has come and come to stay. They have been working on it a long time now and are fully acquainted with its merits. They regard it as the tire of the future, a development that cannot be sidetracked.

The dealer realizes that the manufacturer usually knows what he is talking about on the technical features of a tire. The dealer is perfectly willing to take the manufacturer's word for it that as time goes on the use of balloon tires will be gradually increased. But the dealer wants to know what is going to happen this year, and what stocks he should carry to give the motoring public what it wants.

One fact that is clear; it is going to take some time for the merits of the new tires to demonstrate themselves to car owners. It took about seven years for the cord tire to drive the straight side fabric tire off the market, although the merits of the cord tire were apparent from the first. It can be reasonably assumed then that the balloon tire will not make substantial inroads on the use of high pressure tires during 1924.

It is safe for the tire dealer to expect that eighty-five per cent of the tires sold during 1924 will be high pressure tires. Three important elements enter into the situation: In the first place, very few of the 14,000,000 car owners in the country will want to scrap their present tire equipment in order to adopt balloon tires. Ballon-type tires can of course be used on rear wheels while the front wheels are wearing out the old tire equipment. The bulk of balloon tire equipment this year will be supplied as original equipment by makers.

### TIRE TAX CUT APPROVED

**An additional step toward the final adoption of the decrease of the Federal tax on tires and accessories was taken on April 3 when the Senate Finance Committee reported favorably on the measure. In the March 25th issue of THE RUBBER AGE we reported the steps which the Rubber Association of America and other interested bodies took to secure this reduction in the House. In view of the action of the Senate committee, the prospects at this writing for rapid adoption of the bill by the Senate and approval by President Coolidge are bright.**

Second, a considerable portion of the motoring public will hesitate about buying balloon tires so long as there is any appreciably greater expenditure involved than when standard high pressure tires are used.

Third, there will be a disposition among motorists for some time to come to regard balloon tires as an experiment, while the standard high pressure tires are regarded as a product of demonstrated value and giving complete satisfaction.

The one thing that is going to make it harder for the balloon tire to establish a superior position for itself in public favor is the exceptionally fine service which standard high pressure tires are giving. The last thing a motorist has to worry about today is his tires. Motorists are perfectly satisfied with the service they have been getting from their tire equipment, and there is going to be a stronger disposition than usual to refrain from taking chances with the new product until its superiority has been fully demonstrated.

With the average high pressure tire delivering more mileage for the dollar than ever before, it is going to take quite some time for public sentiment regarding the balloon tire to crystallize, and in the meantime most car owners are going to let well enough alone. All these facts lead to the conclusion that 1924 will be a year in which the dealer will sell some balloon tires, a fair quantity of balloon type tires, but the bulk of the business will be done on standard high pressure types.

## BRUSSELS RUBBER SHOW NOW IN FULL SWING

**Sixth International Exhibition Opened at Brussels under the Patronage of the King April 1—Upwards of 1,500,000 Visitors Expected to Attend before it Closes.**

The Sixth International Exhibition of Rubber, Other Tropical Products and Allied Industries is now in progress at Brussels, having opened April 1. Before the close of the exhibition, which is slated for April 16, visitors from every section of the globe will examine exhibits from many countries which demonstrate the universality of rubber in its commercial utilization by man. The exhibition is being held under the patronage of the King of the Belgians in the big hall of the Cinquantenaire. Attendance is expected to be upwards of a million and a half visitors, judging from past experience.

P. J. Burgess, chairman of The Rubber Growers' Association will present a paper on "Present and Future Problems of the Plantation Rubber Industry". A list of other papers with their authors follows: "Plantation Rubber: The Adjustment of Production and Consumption", by H. Eric Miller, vice-chairman, The Rubber Growers' Association; "Cover Crops and Clean Weeding", by Noel Bingley; "Propaganda for the Rubber Industry", by Sir Stanley Bois, convener of Exhibitions Committee, Rubber Growers' Association; "Labor Forces on Rubber Estates", by N.C.S. Bosanquet; "The Crepe Rubber Sole", by A. O. Devitt; "The Rubber Industry: A Plea for Closer Working", by James Fairbairn; "Medical Research in the Tropics", by Norman Grieve; "Accountancy and Methods of Costing in the Rubber Industry", by J. G. Hale; "The Development of the Rubber Producing Industry, by Eric Macfadyen; "The Training of Scientific Officers for Tropical Plantation Industry", by Prof. J. B. Farmer, D.Sc., LL.D., F.R.S., director of the Biological Laboratories, Imperial College of Science and Technology, London.

The following gentlemen will also present papers, the titles of which had not been announced at this writing: Prof. Blackman, Imperial College of Science and Technology; H. C. Pinching, Senior Scientific Officer, The Rubber

*(Continued on page 12)*

# WILLSHAW DISCUSSES DROP CENTER RIM

**Superintendent of Engineering for the Dunlop Tire & Rubber Co. Reads Paper on Relation of Drop Center Rim to Balloon Tires — Standard Types Described.**

The relation of the drop center rim with the Balloon tire development was the subject of a paper read Monday night, March 24th by Harry Willshaw, Superintendent of Engineering of the Dunlop Tire & Rubber Co., Buffalo, N. Y. before the Buffalo Chapter of the Society of Automotive Engineer's meeting in the Fillmore Room, Hotel Statler.

Mr. Willshaw pointed out that the drop center rim is not a new development, in fact, it is older than the automobile industry, because it was first used with the Dunlop-Welch bicycle tire in 1890. The modern straight side automobile tire is the outgrowth of the 1890 wire beaded casting.

It next came into prominence in the war time, which marked the first really constructive progress made with balloon tires. It was necessary to cushion the delicate mechanism of airplanes against the uneven surface of landing fields. European engineers felt, and still feel, that the large doughnutty tire can be best applied and render highest service, when used in conjunction with the drop center rim.

Before going into the merits of the drop center rim, the speaker dwelt briefly on the various standard types of rims in use today. Among those enumerated was the clincher type used chiefly on Fords. Another was the split type which requires a large flange bar or some other tool to remove the tire. Another was the detachable loose flange type which Mr. Willshaw stated was the correct name in as much as it often comes loose. The drop center rim, he declared, which is a single piece rim having no split loose flange, is practically without disadvantage.

***Specially Adapted to Balloons***

"This type of rim," stated Mr. Willshaw, "is re-introduced chiefly because of the balloon tire". Here the speaker explained in substance the difference between the standard high pressure tire and the balloon or low pressure tire.

The first, he said, is stiff and hard, while the latter is comparatively soft and flexible. Hence, he averred, the drop center rim is practical. In explaining how the balloon tire fitted onto the drop center rim, Mr. Willshaw stated that after it was put on and inflated, the beads slipped into their proper place on the base. All that is necessary to remove it, he said, is to deflate it and press the beads together, the well or channel permitting a slack to develop that allows one bead to be lifted out.

"In studying balloon tires several years ago, my company endeavored to correctly proportion the rim to the particular size the balloon tire called for" said the speaker. "It was considered that the then standard high pressure tire, was, if anything, a minimum that could be accepted for stability as regards a tire section in relation to the rim base width. It was known from practice that if the tire section was out of proportion to the rim width that the high and low air pressure would have a tendency to "roll" and in some instances the wheels would fail to track correctly, thereby rendering steering difficult."

By use of tables the speaker illustrated the amount of "roll" as proportioned to the rim width and also the angle of stability. Also that the tire with the widest rim and greatest angle of stability gave the least "roll". This, stated Mr. Willshaw is an item of interest to the Automotive Engineer and also the car user, as it makes for safety, easy steering and tire economy.

"Although the wide rim base, is advocated and proved to be of advantage to the balloon tire, it does not mean that the rim has to be made heavier than the rims of present day standard practice, owing to the fact that the drop center rim is of much better structure than our present rims, the actual weight of the rim can be reduced by about seven pounds."

Other points in favor of the drop center rim, made by Mr. Willshaw, were that it gives from 6 per cent to 8 per cent additional increase of air space for the tube as compared with the present type of standard rim, and it eliminates the need for the troublesome loose flap needed to protect the inner tube from the beads of the tire. A feature of the drop center rim pointed out is that it allows the valve stem to come through at right angles to the sloping side of the rim recess by merely drilling the necessary clearance hole.

This position, the speaker said, gives an ideal condition for the removal of the dust cap and applying the inflating hose.

That the drop center rim lends itself easily for standardization was an assertion of the speaker. He stated that two base diameters, 20″ and 21″, probably meet all the needs of automobile manufacturers.

## IRELAND MAY MAKE TIRES

**C. J. Callaghan, prominent Irish chemist and industrialist is representing in the United States the Irish Industrial Development Syndicate which plans, among other activities, to manufacture automobile tires and various rubber products in Ireland. The syndicate includes in its personnel the Earl of Grannard; the Earl of Wicklow; Sir Thomas Grattan Esmond; Lord Mayor O'Neill of Dublin, Senator Peter De Loughrey; the Mayor of Kilkenny and other leading business men. Reports have it that the project has received a cordial reception from American industrial leaders. The organization will act in an advisory capacity to the Irish Free State Government on manufacturing and public utility projects.**

## DUNLOP PROMOTES LUTZ TO WESTERN TERRITORY

Leo A. Lutz, who since April 1st, 1923, has been a sales representative of the Buffalo division of the Dunlop Tire & Rubber Co., Buffalo, N. Y., has been appointed manager of the San Francisco division of that organization. This announcement was made recently by E. H. Kidder, general sales manager, who stated that Mr. Lutz and his selling force will serve tire and golf ball merchants in California, Washington, Oregon, Idaho, Utah, Nevada, New Mexico and part of Montana.

Mr. Lutz is a Buffalonian; upon being graduated from business college, he started as salesman for the Welsbach Gas Lamp Co. In 1911 he became western New York representative for the Ajax Tire & Rubber Co., working out of Buffalo. He continued with that firm—covering the same territory—for six years. Sometime after the United States entered the war with Germany, Mr. Lutz enlisted with the ordnance department, where he continued until the cessation of hostilities.

Upon leaving the service he became associated with the sales end of the Glenmore Oil Company. He continued in this capacity until Dunlop commenced operations about a year ago. At that time he became associated with the Dunlop Company serving as first assistant to William A. Golden, district manager for Dunlop at Buffalo.

Kenneth C. Bugbee, office manager of the Dunlop sales company, will go to the west coast with Mr. Lutz where he will become office manager for the San Francisco division.

## Miller Issues Balloon Facts

The March issue of *Tire Trade News*, a house publication of The Miller Rubber Company, Akron, Ohio, published in the interests of its dealers, is entirely devoted to balloon tires. A column or more is utilized in describing each size of balloon-type and balloon tire manufactured by the company. In a clear, easily-understood manner the technical specifications of each size is given, and these specifications are augmented by illustrations of cross-sections. This issue is sure to be appreciated not only by tire dealers but by those associated with the rubber industry who wish to make a study of balloon tires.

## Reality To Rebuild

At a meeting of stockholders of the Reality Rubber Company, Massillon, Ohio, March 11, it was decided to rebuild the plant which was considerably damaged by fire more than two months ago. Several sites in Massillon are being considered and it is planned to build the largest factory in the vicinity at an approximate cost of $50,000. The new plant will manufacture surgeon's gloves exclusively. The former plant was a frame structure located on Grove Ave., near Jackson Lane.

# CANADA IS SEEKING CARBON BLACK PLANTS

**Increasing Use of this Material in Commerce Opens Huge Possibilities for Canadian Natural Gas Fields—Canadian Department of Mines Investigating Subject.**

An increasing interest is being shown in Canada in the manufacture of carbon black from natural gas on account of the growing use of this material in the manufacture of automobile tires, printing inks, paints, stove polishes and many other commodities. Canada at present is supplied with this material from the United States, as is also Great Britain. The Canadian Department of Mines is at present engaged in an exhaustive investigation of the possibilities of making carbon black in Canada.

At the present time British requirements, which amount annually to about ten million pounds, are supplied from the United States. Canadian imports from the same source are about three million pounds. The American carbon black industry is located mainly in West Virginia and Louisiana, but, as many of the gas fields in these states begin to show signs of decline and conservation measures become more restrictive, the industry is seeking new fields.

Ontario and Alberta are the only provinces in Canada possessing large resources of natural gas. Most of the Ontario fields are declining, however, and the supply is rightly restricted to domestic and industrial heating.

In Alberta, the cities of Calgary, Edmonton and Medicine Hat and many of the smaller towns are supplied with the cheap natural gas, and in all but a few fields in central or southern Alberta the gas is piped to domestic consumers, or is conserved for future demand.

There are four or five natural gas fields in Alberta, however, where the prospects for the establishment of a carbon black industry might be considered. These are the Many Islands field, near Medicine Hat, the Wainwright field, one hundred miles east of Edmonton, and the Peace River and Pelican Rapids field, in Northern Alberta.

In the Wainwright and Many Islands fields, while it is believed that extensive gas sands exist, there are few wells drilled at the present time that yield large flows of gas. Another disadvantage is that the gas so far found in both these fields is of poor quality for the manufacture of carbon black and contains little or no gasoline. Transportation facilities are good. It is doubtful if permission would be granted to make carbon black in either of these areas.

Large supplies of gas are known to exist in Northern Alberta, in the Peace River and Athabaska regions. Little reliable information has been collected on its suitability for the production of carbon black or on its gasoline and helium content. Transportation presents some difficulties, though the Peace River field is served by a good railway. The chief obstacle in the successful establishment of a carbon black plant in either of these areas would be the high freight costs.

It should be borne in mind that the present demand for carbon black is limited, and that the Canadian market could be supplied by the output of two or three plants. Great Britain and the Orient are other possible customers, but the competition with the United States for this trade would be keen.

**Harry R. DeGroat**
**Re-elected President of National Association of Waste Material Dealers, Inc.**

## Coast Drops Directors

At a meeting of stockholders of the Coast Tire & Rubber Co., San Francisco, Cal., March 20, Homes Ives, former president and M. J. Whalen, former vice president, were eliminated both as officers and directors. These former officers, together with J. J. Eiseman and A. R. Abrams are defendants under felony indictments before Superior Judge Louis Ward. Unanimous approval of the refinancing plan presented by J. C. Hughes, newly-elected president, was given by the stockholders.

## Ogden Products Improving

According to A. E. Sidnell, manager of the Ogden Mechanical Rubber Products Corp., Ogden, Utah, is rapidly becoming one of the important industries in that city. At an address before the Lions Club he recently predicted an annual business of over $3,000,000 for the company within two or three years.

## Tuttle Announces Removal

On March 31st John B. Tuttle, well-known in the rubber industry as a consulting chemist and technologist, announced a change of address to 75 Bedford St., New York, N. Y.

# N.A.W.M.D: ANNUAL MEETING AND BANQUET

**At Eleventh Annual Meeting of the National Association of Waste Material Dealers, Inc. Harry R. DeGroat is Re-elected President.**

The eleventh annual meeting of the National Association of Waste Material Dealers, Inc. was held at the Hotel Astor, New York City, Wednesday, March 19 at 10.30 a. m. The annual banquet was held that evening in the same hotel. Harry R. De Groat of Philadelphia was re-elected president for the ensuing year and the board of directors was increased from 25 to 31, including the president.

A well-attended meeting of the Scrap Rubber Division of the Association was held at the Hotel Astor on March 18 at which Nat. E. Berzen was re-elected chairman. At this meeting discussion took place in reference to obtaining a reduction in ocean freight rates covering scrap rubber, and a resolution requesting the traffic department of the association to endeavor to secure lower rates was passed. The argument in favor of lower rates is to be based on the fact that scrap rubber has a greater density than rags; it is therefore entitled to a rate at least as low as that charged for rag shipments. Those dealers exporting scrap rubber are requested to advise the department of the ports to and from which they are now moving rubber, the volume of business and the rates they are paying at the present time. This information will be treated as confidential and will only be used as a guide in an endeavor to work out this problem.

It was brought out at the meeting of the greater association that the past year has been the most successful in its history. The number of new members whose dues started with the beginning of the present fiscal year is 128 and there are 20 applications for membership pending at this writing. This increase in membership is unprecedented and it is believed by numerous members of the association that it is due to the fact that the association has proved to the scrap material trade that it is rendering a service almost indispensable. During the year a Southern Division was formed with over 30 members and the membership abroad has also been steadily increasing.

The banquet of the association was the largest it has ever held; it was not only necessary to use an entire ball room but a section of another one. President De Groat, acting as toastmaster after reading a telegram from a British firm which is a member, introduced Hon. James E. Watson, U. S. Senator from Indiana and a member of the Finance Committee of the Senate. Capt. Irving O'Hay, U. S. Army, retired, who spoke at the Rubber Association dinner was the second and last speaker.

Applications for membership pending include the National Aniline & Chemical Co., Inc., New York, N. Y. and R. T. Vanderbilt Company, New York, N. Y.

# RUBBER ASSOCIATION ACTIVITY IN MARCH

**Board of Directors' Meeting — Specification Committee of Sundries Manufacturers Division Holds Two-day Session at Akron—Tire Division Meeting.**

The Board of Directors of the Rubber Association met on February 28. In addition to giving attention to routine matters relating to the Association's activities, the board approved the recommendation of the Foreign Trade Division that the Rubber Association become a member of the International Chamber of Commerce.

* * *

One of the principal subjects discussed at the March 7 meeting of the Calendered Rubber Goods Section—Rubber Clothing Division was co-operative advertising and publicity to promote the sale of rubberized water-proofed clothing. No definite conclusion was reached with respect to the subject, however, but it is receiving serious consideration by the rubber clothing manufacturers.

* * *

The Auto Fabric Manufacturers Division met at the Yale Club, New York City, on March 10.

* * *

The Rubber Heel and Sole Division met at the Yale Club, New York City, on March 11. After the adoption of by-laws to govern the operations of the Division, an Executive Committee was elected for the ensuing year, consisting of the Essex Rubber Company, The B. F. Goodrich Company, Goodyear Tire & Rubber Company, Miller Rubber Company, Panther & Panco Rubber Company, and the United States Rubber Company.

* * *

The Specification Committee of the Rubber Sundries Manufacturers Division held a two-day meeting at Akron, Ohio on March 11 and 12. Detailed consideration was given to the specifications of the Federal Specifications Board covering druggist sundries of all kinds. The committee recommended certain changes in the specifications, which the Representatives of the Federal Specifications Board who attended the meeting will present to the board for consideration.

* * *

The Toy Balloon Section of the Rubber Sundries Manufacturers Division met in Cleveland, Ohio on March 13. Tentative recommendations were adopted in connection with the standardization of form sizes and balloon weights.

The next meeting of the Toy Balloon Section will be held at Ashland, Ohio on April 24, when final action will be taken in the matter of standardization.

* * *

The Tire Manufacturers Division of the Association is attempting to obtain data relative to current stocks of pneumatic and solid tires and inner tubes in the hands of dealers as of Apirl 1. The Association, on March 25, distributed to 120,000 tire dealers throughout the United States a questionnaire asking for this information. The attempt has the endorsement of the National Tire Dealers' Association and that organization is co-operating with the Rubber Association in urging upon its members the desirability of furnishing their figures. The statistics compiled from the questionnaire will be published in the rubber industry trade papers and in the automotive columns of the daily press. The present available statistics concerning tire manufacturers' production and shipments and the published figures, relating to automobile registration, together with the data to be developed concerning dealers' stocks, will make possible, for the first time, a complete realization of conditions in the tire industry.

* * *

The Association will soon distribute to rubber manufacturers and crude rubber importers and dealers, its usual quarterly questionnaire calling for information concerning the consumption of crude rubber in the manufacture of the various products of the rubber industry, sales value of finished products, number of persons employed in the industry, consumption of scrap rubber and production of reclaimed rubber and quantity of crude rubber on hand in the United States or abroad for the United States ports as of March 31.

On March 24 there was a meeting of a Sub-Committee of the Mechanical Rubber Goods Division to consider plans for conducting an educational advertising campaign among hardware dealers and jobbers concerning standardization of garden hose sizes on the basis of 5/8" hose only. The campaign will be begun in April and will continue through September. The *Hardware Age, Hardware World* and *Hardware Dealers' Magazine* will be the media and the advertisements will outline the benefits realized by manufacturers, dealers and consumers as a result of standardization on one size of garden hose.

* * *

The Executive Committee of the Tire Manufacturers Division of the Rubber Association at its March 26th meeting recommended for approval by members of the Division that the Standard Tire Warranty be revised so that *all* pneumatic tires be warranted free from defects in material or workmanship developing within ninety days from date of first road wear. The revised Warranty requires that claims for tires alleged to be defective must be filed by the original user of the tire within the ninety day period, or within five days thereafter. The Executive Committee also recommended that the revised Warranty be made effective May 1, 1924. It is the purpose of the Association to acquaint tire dealers and motorists with the revised Warranty by distributing to approximately 146,000 tire dealers in the United States a display poster containing its text. No change was made in the present Warranty covering solid or cushion tires.

* * *

At the same meeting a discussion of the desirability of adopting a schedule of load carrying capacities and inflation pressures for balloon tires indicated that because of differences of opinion respecting manufacturing practices, variations in car weights, proper wheel loads and desirable corresponding inflation pressures, it would be impracticable for the Tire Executive Committee to recommend a standard schedule for use by tire manufacturers. The Committee concluded to recommend to members of the Tire Manufacturers Division that inflation pressures for balloon tires be measured on the basis of a tire deflection of approximately 22%, which is believed to be the most accurate method of insuring proper inflation.

## Balloon Tire Inflation Chart

| Air Pressure "Pounds" | Load Carrying Capacities 4.40 Size | 5.25 Size | 6.20 Size | 7.30 Size |
|---|---|---|---|---|
| 21 | — | — | — | 1000 |
| 22 | — | — | 800 | — |
| 23 | — | — | — | 1100 |
| 24 | — | 700 | 900 | — |
| 25 | — | — | — | 1200 |
| 26 | — | 750 | — | — |
| 27 | — | — | 1000 | 1300 |
| 28 | 600 | 800 | — | — |
| 29 | — | — | — | 1400 |
| 30 | — | 850 | 1100 | — |
| 31 | 650 | — | — | 1500 |
| 32 | — | 900 | 1200 | — |
| 33 | — | — | — | 1600 |
| 34 | 700 | 950 | — | — |
| 35 | — | — | 1300 | 1700 |
| 36 | 750 | 1000 | 1400 | — |
| 37 | — | — | — | 1800 |
| 42 | — | — | 1500 | — |

—*From February, "The Goodrich"*

## JOHN BUFFELEN HEADS SOUND RUBBER COMPANY

Announcement was recently made of the election of John Buffelen as president of the Sound Rubber Company, Tacoma, Wash. Mr. Buffelen, a well-known Tacoma lumber manufacturer, has already announced a program of development which is expected to make the rubber company one of the most successful in the city. New equipment will be secured so as to increase production it is said.

"We have made a complete survey of the plant and find it is a fine plant and in perfect condition," said the new president. "With economical administration and care in the production and marketing of the product, I believe this can be built up into a flourishing and profitable institution."

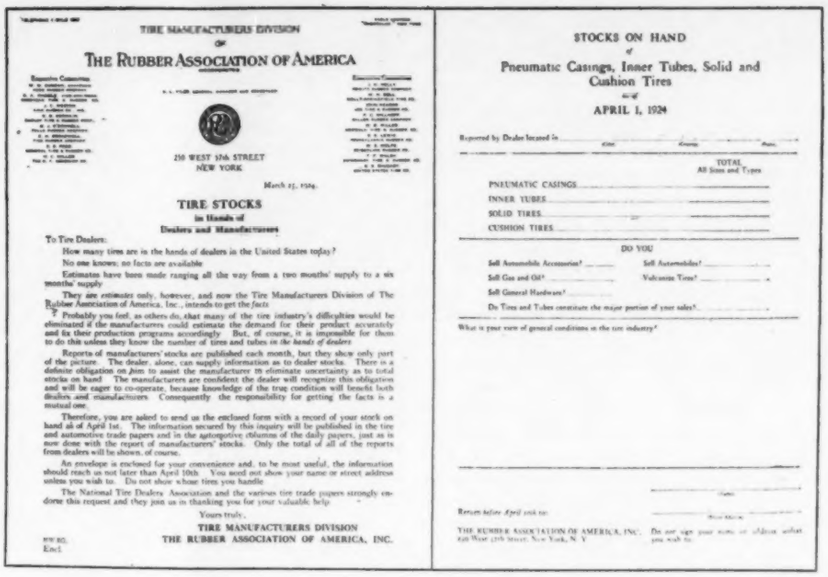
# R.A. MAKES SURVEY OF TIRE DEALERS' STOCKS

**Questionnaires Sent Out to 120,000 Tire Dealers by Tire Division of Rubber Association—First Time Such an Attempt Has Been Made.**

For the first time in the history of the tire industry, authentic data as to current stocks of pneumatic and solid tires and inner tubes in the hands of dealers will be obtained by the Tire Manufacturers Division of the Rubber Association as a result of a questionnaire which the Association distributed on March 25 to 120,000 tire dealers throughout the United States. The National Tire Dealers' Association has approved this statistical activity and is co-operating with the Rubber Association in urging upon its members the desirability of furnishing their figures.

The Rubber Association has for some time been compiling and publishing statistics showing the total number of tires and tubes of all kinds in manufacturers' inventories, also production and factory shipments. This has been of material assistance to manufacturers in enabling them to plan their production schedules. However, another very important part of the picture is the current stocks of tires and tubes in dealers' hands. Up to the present, no attempt has been made to obtain facts about dealers' stocks. It is the belief of the tire manufacturers who are behind this movement that the data to be obtained as a result of the questionnaire will be of incalculable benefit to both manufacturers and dealers, as these facts will be of great aid in planning intelligent production and distribution.

The present available statistics concerning manufacturers' production and shipments and the published figures concerning automobile registration, together with the data to be developed concerning dealers' stocks, will make possible for the first time a complete realization of conditions in the tire industry.



TIRE MANUFACTURERS DIVISION
OF
THE RUBBER ASSOCIATION OF AMERICA

250 WEST 57th STREET
NEW YORK

March 25, 1924.

TIRE STOCKS
in Hands of
Dealers and Manufacturers

To Tire Dealers:

How many tires are in the hands of dealers in the United States today?

No one knows; no facts are available

Estimates have been made ranging all the way from a two months' supply to a six months' supply

They are estimates only, however, and now the Tire Manufacturers Division of The Rubber Association of America, Inc., intends to get the facts

Probably you feel, as others do, that many of the tire industry's difficulties would be eliminated if the manufacturers could estimate the demand for their product accurately and fix their production programs accordingly. But, of course, it is impossible for them to do this unless they know the number of tires and tubes in the hands of dealers

Reports of manufacturers' stocks are published each month, but they show only part of the picture. The dealer, alone, can supply information as to dealer stocks. There is a definite obligation on him to assist the manufacturer to eliminate uncertainty as to total stocks on hand. The manufacturers are confident the dealer will recognize this obligation and will be eager to co-operate, because knowledge of the true condition will benefit both dealers and manufacturers. Consequently the responsibility for getting the facts is a mutual one.

Therefore, you are asked to send us the enclosed form with a record of your stock on hand as of April 1st. The information secured by this inquiry will be published in the tire and automotive trade papers and in the automotive columns of the daily papers, just as is now done with the report of manufacturers' stocks. Only the total of all of the reports from dealers will be shown, of course.

An envelope is enclosed for your convenience and, to be most useful, the information should reach us not later than April 10th. You need not show your name or street address unless you wish to. Do not show whose tires you handle

The National Tire Dealers Association and the various tire trade papers strongly endorse this request and they join us in thanking you for your valuable help

Yours truly,

TIRE MANUFACTURERS DIVISION
THE RUBBER ASSOCIATION OF AMERICA, INC.

Encl.

STOCKS ON HAND
of
Pneumatic Casings, Inner Tubes, Solid and Cushion Tires
as of
APRIL 1, 1924

Reported by Dealer located in _____ (City) _____ (County) _____ (State)

| | TOTAL All Sizes and Types |
|---|---|
| PNEUMATIC CASINGS | |
| INNER TUBES | |
| SOLID TIRES | |
| CUSHION TIRES | |

DO YOU

Sell Automobile Accessories? _____ Sell Automobiles? _____

Sell Gas and Oil? _____ Vulcanize Tires? _____

Sell General Hardware? _____

Do Tires and Tubes constitute the major portion of your sales? _____

What is your view of general conditions in the tire industry?

_____ (Date)

Return before April 10th to: _____ (Street Address)

THE RUBBER ASSOCIATION OF AMERICA, INC. 250 West 57th Street, New York, N. Y.

Do not sign your name or address unless you wish to.

**Dealers' Tire Stock Questionnaire**

**Tire Dealers Have Been Asked to Fill Out the Form Reproduced Above and Return it at Once to the Rubber Ass'n.**

## Vanderlip Out of U. S.

It is rumored in the financial district of New York City that M. C. Brush, president of the American International Corporation, will be elected a director to succeed Frank A. Vanderlip, whose resignation is expected because of the fact that he is severing all corporate connections. The American International Corporation owns a large block of the capital stock of the United States Rubber Company.

## India Declares Dividends

The India Tire & Rubber Co., Akron, Ohio, through its treasurer, P. C. Searles, announced dividends at a directors' meeting March 11 "as of record March 20" of one per cent on common stock and one and three-quarters per cent on preferred stock.

## U. S. Rubber to Meet April 17

Stockholders of the United States Rubber Company, New York, N. Y., have received notices of the 32d annual meeting of the company which will be held in New Brunswick, N. J. on April 17. On this occasion the annual election of officers will also be held and consideration given to proposed amendments of the by-laws. All shareholders of record as of March 26 were requested to attend this meeting.

## Goodyear to Make Balloon

Work has started on the "Goodyear III," the Akron balloon to be entered in the National Elimination Balloon Race to be held in San Antonio, Texas, April 23, it was recently announced by officials of the Goodyear Tire & Rubber Co. Ward T. Van Orman, Goodyear aero-engineer and veteran of two international and five national contests, will pilot the bag with C. K. Wollam, lighter-than-air expert, as his aide.

The entry of this balloon is the eleventh since 1913. In the ten previous races the Akron balloon won three national titles and an international one.

## Palmerton Sails for Europe

P. L. Palmerton, Chief of the Rubber Division of the Department of Commerce, sailed March 22 for Europe where he will review conditions in the rubber goods trade in several European countries. As he studied these markets in a general way on his European trip two years ago, he will be able to give ample attention to several special questions which have been referred to him by American manufacturers. His itinerary includes England, France, Belgium, and the Netherlands, and will require about two months.

## Wildman Stockholders Meet

Stockholders of the Wildman Rubber Company met recently at the new plant, Bay City, Mich. W. W. Wildman, president, turned the meeting over to H. P. Orr, one of the directors, who in turn called upon Mr. Wildman, Thomas H. George, James C. McCabe, S. J. Tennant, L. C. MacGregor and Robert H. Rayburn for short talks. After the meeting the visiting stockholders were conducted on a tour through the new plant. It was announced that installation of machinery is being planned. Directors elected were: W. W. Wildman, J. C. McCabe, S. J. Tennant, L. C. MacGregor, H. P. Orr, Thomas H. George and Robert H. Rayburn.

## New Branch Office

Meyer, Measor & Burkill, Ltd., London, opened a branch office at 39 Lombard St., London, E. C. 3 on March 1 according to an announcement made recently. Messrs. W. G. Pratt & Co., Ltd., 72 Mark Lane, E. C. relinquished the Singapore agency of the above crude rubber brokers on the same date. Following are the directors of Meyer, Measor & Burkill, Ltd.: C. R. Burkill, G. Graybrigge, J. V. C. Davis, V. Meyer, E. S. T. Ehlers and C. O. H. Schafer.

## Goodrich Plans Stock Cut

At their annual meeting, stockholders of the B. F. Goodrich Company will be asked to approve a reduction in the common stock from 1,500,000 to 750,000 shares. According to officials of the company, this reduction does not imply any change in its capital as all the stock above 750,000 shares is held in the treasury.

# RUBBER REAL VICTOR IN AKRON TROLLEY STRIKE

**Failure of Bus Transportation System Under Individual Leadership Shows Need of Unified Control by Responsible Organizations—Bus Has Big Future Says O'Neil.**

To a large extent the rubber industry of this country has lost sight of the real value of the transportation problems which Akron has been called on to solve in the past few months. It is claimed by a number of rubber executives that the final settlement of the street car strike in Akron will have a far reaching effect on the transportation problems of the future. The big lesson learned from that strike was that no number of irresponsible individual bus operators can ever hope to solve the transportation problems of any large city in this country. Such an attempt will do more harm to bus transportation, and to the tire industry, than any other single factor.

It was with much gratification, therefore, that the rubber industry in general saw the failure of the plan adopted by the Mayor of Akron when jitneys and busses from nearby and distant cities were allowed to ply the streets of Akron in an attempt to carry the thousands of passengers who required transportation every day. In the first place there were not enough busses to take care of the people and the bad weather further helped to complicate the situation and to show the futility of such organized means of traction.

### *History of the Strike*

The strike on the street car system took effect on Feb. 1, after the Mayor had offered the traction company the alternative of a straight five-cent fare or a discontinuance of its franchise. The company decided to stop running its cars and immediately busses, taxi cabs and private cars loaned by Ford were mustered into service. Appeals to the public to have patience while a bus system was developed failed when reports continued to come in of poor service and excessive charges.

Appeals to the rubber factories for help and cooperation on the plea of additional tire business really proved a boomerang because tire executives realized that although bus transportation would undoubtedly develop into a big business some day, it was not ready yet and that any immature plans would hold back this day for a considerable period—and the tire manufacturers sided with the traction company.

In line with this idea William O'Neil, President of the General Tire & Rubber Company, showed that the large traction units of the country were already adopting busses as auxiliaries to their trolley lines both as independent factors and in place of new tracks wherever practicable. He declared that it would be a misfortune if the present transportation systems of the country were to have their investments destroyed and that the tire companies wanted to sell their products to responsible traction companies rather than to the unorganized individual bus owners. The failure of the Akron experiment and the willingness of the traction company to accept a 5-cent fare with a 1-cent transfer has resulted in a temporary settlement until next winter.

There is hope to believe that bus transportation will largely, if not entirely supersede trolleys in most cities of the country within the next generation. The success of tests in New York, Chicago and other cities is leading the way to further development and undoubtedly other cities will soon follow this lead. Evolution of this kind must be watched closely by the tire companies for faulty plans may cause a set-back which will mean the loss of a large amount of business to the tire industry. This development is something which will be gradual and which cannot be forced into full growth.

### *Address by Mr. O'Neil*

In an address delivered before the Kiawanis Club of Akron early in the transportation fight, Mr. O'Neil reviewed the traction problems of the city and in addition, looked into the future and gave his ideas of the future development of busses for transportation purposes and the effect on the tire industry. His address in part is as follows:

"I've often heard people in Akron lament the fact that we did not have a more varied line of industry here. They say that one large industry dominates everything—That all our eggs are in one basket.

"They point to Cleveland—Indianapolis—Cincinnati.

"I disagree with this view. Even if we did not have large important industries here which are absolutely independent of rubber, I maintain that in rubber itself we have as many varied lines, each one distinct and not dependent on the other, as we have variations in the price of cotton and rubber—and those variations are great enough to suit the most fastidious tastes.

"Rubber is different from steel—The great bulk of the output of the Steel industry goes for railroads, buildings and building supplies. Now a great share of the freight is building supplies, the coal that makes the cement, bricks, steel etc. Consequently when building business is slow railroads are slow—And neither industry is ordering steel.

"Again a big cost in steel is coal. It is also the principal item in other building supplies. When coal is high not only is steel high but everything else that enters into construction is high. Steel goes mostly into permanent investment such as rails, car equipment, building etc.

"When costs rise abnormally permanent investments are delayed.

TREND OF RUBBER

"Rubber does not go into permanent investment. The auto tire, the truck tire, steam hose, belting, rubber shoes, matting, are all temporary investments. They are always a necessary adjunct, an accessory to some larger investment. If the weather is nice cars make more miles. If the weather is bad, rubber shoe business increases. The same factories which make rubber shoes make hose. If the weather is dry and warm when it ought to be wet and cold why the cloak and suit business is very bad. And the rubber factory instead of making rubber shoes is busy on fire hose to help the fire department fight the cloak and suit factory fires.

"Rubber not one industry—it is many industries. Tires themselves are not one industry. The passenger car, the truck, the taxicab, the bus are all different. Taxicabs are busier in winter than summer, and the bus,—why, that is an institution only just started as compared with its future development.

"But how about 1920, you say. 1920 was a disastrous year in every town, in every county, in every line of business, except the fire hose business. But 1920 was particularly disastrous in Akron due to one basic thing, a point wherein the steel business is far ahead of rubber. And that is in the credit of the class of trade we sell.

"Steel business is done with building contractors protected by State lien laws, with railroads and car equipment companies—with responsible hardware jobbers. When steel is sold, the buyer has to take it and has to pay. The buyers are able and obliged to live up their contracts. A few salesmen sell the output and it is contracted for before it is made up. On the other hand in 1920 the rubber industry had built its sales policies on a false foundation. Too many branches—too many salesmen had encouraged too many irresponsible, inexperienced dealers to enter the field.

EVENTFUL 1919

"In 1919 these branch salesmen established three dealers where they only had one before They encouraged these dealers to buy any quantity on dating terms, promising an increase in price. The factories based their estimate for production on these orders. They lost sight of the principle that merchandise sold to the dealer is not really sold until the consumer takes it. This merchandise still hangs in the market and stops further factory demand. Under the promise of rising prices the dealers bought twice as many tires as they ever sold in any one year. . . . . .

"The bus is the big, coming business. It will be bigger than the present pleasure car business. But Gentlemen, we want that business in the hands of responsible, financially sound and successful companies. When I think of the position our politicians, our Mayor, etc. are taking on this matter of transportation I feel very much like the lawyer who was cited for contempt of Court. "Your Honor," he said, "I feel I have shown no disrespect to yourself. On the contrary I have concealed my real feelings."

BUSSES TO REPLACE TROLLEYS

"Gentlemen, I believe the bus is going to eventually replace the street car. But Gentlemen, they can't be operated for a five cent fare any more than the cars can be operated. Why then should we of Akron, whose future is so bound up in the financial success of the bus, permit our short sighted, out-of-date politicians to cloud the issue!

"Twenty years ago it was popular to jump on the public service corporations. It is old stuff, but it isn't smart stuff. What's more it isn't honest stuff."

# URGES MANUFACTURERS TO LOCALIZE TIRE SALES

The March meeting of the Mid-West Rubber Manufacturers Association at the Morrison Hotel, Chicago, Ill., was featured by the talk of O. E. Blekre, president of the Blekre Tire & Rubber Co., St. Paul, Minn. who told how his firm was meeting the competition of the larger manufacturers by concentrating sales efforts upon the territory adjacent to its plant, and urged the small manufacturers to do likewise, if they would survive the present keen competition. The small manufacturer he said, who decides to build up business in his home territory, will eliminate the expense of branch offices and can cut credit losses because of his close touch with the dealers.

The speaker also counseled the smaller manufacturers to visit New York as often as possible and get acquainted with the fabric, rubber and chemical brokers. The large firms are still endeavoring to obstruct the sales of the smaller ones, he said, and toward that end it will not be surprising if there is a price cut on tires in June or July. Some of the big manufacturers, he says, have taken a loss on their tire business during the past year, but they have made this up on their mechanical goods. Mr. Blekre also asserted that his organization considered the balloon tire in the experimental stage and would not make any in 1924. The semi-balloon tire, he said, is entirely impractical and the big houses featuring it will have much trouble this year.

President Thomas Follen was chairman of the meeting. It is expected that the next meeting will be held the second Tuesday in April, in Chicago.

# RUBBER GOODS EXPORTS RISE IN FEBRUARY

**Seasonal Increase Shown in February Statistics—Many Tires Shipped to Argentina, England, Japan, Cuba, Brazil and Philippines—Footwear Exports Good.**

Export shipments of rubber manufacturers increased in value from $2,709,319 in January to $3,037,840 in February, 1924, as compared with an increase from $2,932,900 in January to $3,142,150 in February, 1923, showing according to E. G. Holt, Assistant Chief of the Rubber Division of the Department of Commerce, that the increase in exports is in accordance with the normal seasonal demands of foreign markets. Exports of automobile casings increased from 72,426 in January to 89,448 in February, 1924. The principal foreign destinations of automobile casings in February were Argentina, England, Japan, Cuba, Brazil, and the Philippine Islands, each market taking over 5,000 during the month. There were 94,222 automobile inner tubes exported, Brazil being the leading customer with 16,313, followed by Mexico, Cuba, Argentina, and England, each taking from 5,000 to 11,000. Of the 9,424 solid tires exported, England took 2,457, and Japan 1,762. Tire exports to Japan continued to be heavy in February. Japan was the leading market for tire accessories and repair materials followed by Canada, England, Argentina, and Mexico, each taking over 5,000 pounds during the month.

### *Japan and England Markets*

Japan was also the leading customer for rubber boots and rubber shoes, and England for canvas rubber-soled shoes. England was second in the trade in rubber boots and ranked third, following Uruguay, in exports of rubber shoes. There were 52,108 pairs of rubber boots, 88,986 pairs of rubber shoes, and 318,216 pairs of canvas rubber-soled shoes exported during February. The leading market for the 135,739 pounds of rubber soles and heels shipped were Cuba, the Philippines, Argentina, Mexico, England, British South Africa, Venezuela, and Uruguay, the first-named taking 27,985 pounds and the last 6,503 pounds.

## Howe Rubber Denies Rumors

Rumors to the effect that the Howe Rubber Company, New Brunswick, N. J. was to close down were recently denied at the plant where it was said by Mr. Christie: "There have been rumors that we expect to close down in a short time. This is not true, but I can imagine that they were founded on the fact that we have cut down our organization about half. This was done because formerly our overhead expenses were out of all proportion to our profits. With a little reorganization we found that we could carry on our work with a great deal less help. This is now being done and it probably accounts for the rumors."

## SEES TIRE CUT WITHIN FEW MONTHS

**In a recent talk before members of the Mid-West Rubber Manufacturers' Association, E. O. Blekre urged small tire manufacturers to strengthen their organizations so as to be able to meet a tire price decline on the part of the larger manufacturers sometime in June or July. He urged a concentration of sales efforts on the territory adjacent to the small manufacturers plant in order that this trade might be completely covered and so as to do away with the expense of branch offices.**

## California Goodyear Resumes Dividends

The Goodyear Tire & Rubber Co. of California announced March 20 at the annual meeting of stockholders held in Los Angeles that the 7 per cent dividends on preferred stock would be resumed. It was also announced that a deficit of $3,157,762 in March, 1921, has been changed into a surplus of $908,085 at the end of 1923.

## AMERICAN RUBBER CORP. BUYS JERSEY CITY PLANT

Having outgrown the facilities of its plant in Newark, N. J., the American Rubber Products Corporation, which was organized in February, 1923, has acquired the plant of the American Butterine Company, at Eighth and Henderson Sts., Jersey City, N. J. and is equipping it with modern machinery for the manufacture of rubber tiling, golf balls, plumbers' supplies, radio parts and automotive rubber specialties. A solid center golf ball will be one of the largest products of the new plant. It is said that the cover of this ball also will differ from the present balata ball and will be vulcanized to the solid core in an entirely different way.

Associated with Augustine Davis, president, are John T. Earl, vice president, and Daniel E. Evarts, who is vice-president of the New Jersey Title Guarantee & Trust Co. K. C. Madden is secretary of the company and Robert J. Earl treasurer. Under James A. Watt, general manager, are L. G. Hechinger, sales manager; S. L. Mullane, factory superintendent; and Carl S. Groves, purchasing agent.

## *Rudolph A. Low*

Rudolph A. Low, former vice-president of the United States Rubber Reclaiming Company, 100 East 42nd St., New York, N. Y., and well-known in the rubber reclaiming industry, died in Paris, March 18. He had been recuperating from a cardiac affliction since last July.

Mr. Low was born in Mecklenburg-Schwerin, Germany, seventy years ago and came to the United States with his family in 1865. He had been identified with the rubber industry since 1872, and was the holder of several valuable rubber patents concerned with the reclamation of rubber. In the reclaiming division of the industry he was considered a leading authority.

After serving with Charles Loewenthal & Co., New York City, he erected a small reclaiming plant at Cresskill, N. J. Two years later, about 1882, the firm of Loewenthal & Morganstern was organized and a factory opened in Jersey City, N. J. The firm was incorporated in 1884. In 1890 the plant was leased by The Rubber Reclaiming Co., of which Mr. Low was treasurer. When this company was dissolved in 1895 Mr. Low leased his plant to the New Jersey Car Spring & Rubber Co. Then for a time he abandoned the reclaiming business, having been elected president and general manager of the Manhattan Fire Insurance Co., the Fire Association and the Armstrong Fire Insurance Co.

In 1899 he sold out his fire insurance interests and returned to the reclaiming industry under the firm name of the Loewenthal Rubber Co. He merged his interests the following year with those of the United States Rubber Reclaiming Co., of which he was treasurer and a director. He retired in 1921 and went abroad. Mr. Low is survived by his widow, a son, and three brothers.

R. A. Low

## *John J. Cassidy*

John J. Cassidy, Detroit Branch Manager of the United States Rubber Co., died in March after an operation. Mr. Cassidy had been with U. S. for 30 years, a large part of the time in New York. He is succeeded as Manager by J. J. Pokorney, formerly manager of the Mechanical Department in Detroit.

## *Denis J. McGrath*

The 'Grand Old Man' of the St. Paul Branch of the United States Rubber Co., Denis J. McGrath, died recently. Mr. McGrath was the oldest salesman of the branch and would have completed 40 years service next September.

## SEIBERLING 1923 PROGRESS CONSIDERED SATISFACTORY

At a meeting of stockholders held at Akron, Ohio, in the beginning of March officers and directors of the Seiberling Tire & Rubber Co. were reelected for the ensuing year. Although additional revenue was added to the surplus, no dividends were declared. For the year closed December 31, 1923, sales were $5,782,321, as compared with sales of $3,845,779 for the previous year, which was its first year in business. Net profit for the last year totaled $124,202 before charges, and $12,526 after charges had been deducted.

The reelected officers are: F. A. Seiberling, president; C. W. Seiberling, vice president and manager of purchases; Harry L. Post, vice president and manager of sales; W. S. Wolfe, vice president and manager of the factory; W. E. Palmer, secretary; and W. A. Vaughn, treasurer. Reelected directors include the above officers and George Bishop and W. A. M. Vaughn. Mr. Seiberling, president said that the business of the company during 1923, its second year in existence, had shown a great improvement over the previous year and that the prospects for 1924 were bright.

## Dunlop Clearance Gauge for Balloons

The Dunlop Tire & Rubber Co., Buffalo, N. Y. is distributing to its dealers a balloon clearance gauge in order to help them determine whether or not there is sufficient clearance to equip various cars with balloon tires. By placing this gauge on the hub cap at a point marked, which coincides with the automobile manufacturers' balloon replacement recommendations, and swinging the other end to the point of least clearance on the fender, the dealer may easily be certain that the balloon-type to fit the rims will go on the car. The balloon-type sizes to fit present rims together with full instructions for the use of the gauge are also plainly shown on the device, which looks like an ordinary wooden yard stick.

## New Directors for Lee

C. H. Booth, F. M. Small, formerly of the Republic Rubber Corporation, and William B. Dunlap were elected directors March 28 to succeed J. C. de la Cour, S. B. Fleming and James Fayne at the annual meeting of the Lee Tire & Rubber Co., Inc. The other directors were reelected.

## Dayton Altering Finances

The Dayton Rubber Mfg. Co., Dayton, Ohio, is in process of altering its finances to the end that its fixed dividend requirements may be brought within its earning power, according to a recent statement issued by H. F. Porter, assistant to the president. If this change is effected it is expected that the company will be able to pay a dividend on the new preferred stock in 1924 and may also make a small payment on the proposed priority common stock. It was said in this statement that the cash and receivables are more than sufficient to pay all current indebtedness, leaving a healthy inventory and a good plant and equipment back of the stock. "Our sales department is going ahead with confidence," concludes Mr. Porter.

## Trade Commission Charges Firestone Steel Products

Together with eight of its distributors, the Firestone Steel Products Company, Akron, Ohio, was charged March 18 by the Federal Trade Commission with combining to exchange prices and to suppress competition in the prices of its products.

The Commission alleges that the Firestone company gives each dealer an exclusive territory and enters into a contract with him to maintain a fixed resale price and trade discounts used in connection with each territorial agreement. Various other charges embodied in the complaint of the Commission filed in Washington include distribution of retail prices, which dealers are required to maintain, and it is alleged that the company coerces dealers through threats of loss of business to adhere to such prices.

The Firestone Steel Products Company has thirty days in which to file an answer, after which the case will be brought to trial.

## Mt. Vernon Rubber Meets

The annual meeting of stockholders of the Mt. Vernon Rubber Company, Mt. Vernon, N. Y., was held March 10. With Ex-Senator E. G. Lloyd, serving as chairman, Walter E. Hane, treasurer, reported assets of $645,000, with outstanding stock fully paid and issued amounting to $219,140, and total stock subscribed approximately $300,000. In his address W. M. Perkins, president and general manager of the company, said that although the officers had taken the plant as they found it a year ago in a chaotic condition and uncompleted state, they had raised sufficient money to complete the equipment and make the factory ready for operation. He said in part: "Our plant is now ready to operate. Sufficient funds for this purpose are not available at this time." G. H. Jones, secretary, gave a brief synopsis of the activities of the year.

## U. S. Providence Plant Damaged

The hard rubber plant of the United States Rubber Company at Providence, R. I. was considerably damaged by a fire March 21st that broke out in the grinding room, caused, evidently by spontaneous combustion. The fire was fought by the Providence firemen for two hours before it could be said to be extinguished. One of the workmen, who was engaged at the top of a large settling chamber at the time of the fire, was burned about the face and hands.

## BRUSSELS RUBBER SHOW NOW IN FULL SWING

*(Continued from Page 5)*

Growers' Association, F.M.S.; Dr. H. P. Stevens, Consulting Chemist, The Rubber Growers' Association.

Exhibitors include The Rubber Association of America; The Rubber Growers' Association; The Rubber Association of Ceylon; The Rubber Association of Malaya; The International Association for Rubber Cultivation in the Netherlands East Indies; The Governments of Belgium, Brazil, France (Colonies and Protectorates); The Belgian Congo Companies; and numerous American, French, Belgian and British manufacturers. Exhibits embrace manufactured articles; reclaimed rubber; compounding ingredients; tropical raw materials; goods manufactured from tropical products; and new inventions and processes applicable to the rubber industry.

The booth representing the rubber industry of the United States is in charge of Elmer Roberts who recently left this country with all the material to be used. The booth will be in the form of huge reproductions of books on the pages of which are presented various facts on world production of crude rubber and the consumption of rubber for various articles, such as tires, footwear, belting and hose, automobile statistics, etc. In addition a large number of views of rubber plants and goods will be shown including a complete exhibit of American rubber products from which all trade marks have been obliterated.

A very interesting book for distribution has been compiled and printed by the Rubber Association. It is 42 pages and cover, attractively printed on antique stock. It is published in both English and French in commemoration of the participation of the Rubber Association in the sixth International Exhibition of Rubber. The subject matter is an outline of the important place held by goods of rubber in the everyday life of the people of the United States. A number of illustrations in color served to lend a pleasing touch to the book and it is sure to be highly regarded by all friends of the American rubber industry.

## New Tire Fabric Plant

A new textile manufacturing plant, producing both tire fabric and tire cords has been opened in the Burgess-Lang building, Lowell, Mass., and is now running on a 24-hour basis. The firm is known as the Far-Mac Fabric Company.

Recently the Farley-McCreary Co., Akron, Ohio, consolidated with the Richardson-Pevey Co., North Chelmsford, incorporating under the laws of Ohio into the Far-Mac Company with Russell Farley as president.

According to J. C. Pevey, in charge of production, all machinery is of individual drive and there are 25 employees working in three shifts. The present capacity of the plant is 20,000 pounds of tire cord each week. As fast as it can be turned out, this production is being sold, it is stated.

## DUNLOP SOLID CUSHION TIRE PUT ON MARKET

Dunlop Tire & Rubber Co., Buffalo, N. Y., is now marketing a solid cushion tire, according to E. B. Germain, president. This new product is to be known as the Dunlop Cushion. It is designed, Mr. Germain states, for truck owners who insist on maximum cushioning from their tires rather than ability to carry a maximum load. At present Dunlop is building its own rubber product in two sizes 36 x 6 and 36 x 5. In all probability, Mr. Germain says, these sizes will be augmented by others later on.

According to the president of Dunlop, the name of the tire describes its chief quality. The cushion tire means more cushioning, and in addition more speed for trucks. The Dunlop Cushion was built primarily to meet the demand for more cushioning at a slight sacrifice in the load carrying capacity.

Dunlop engineers say that the Dunlop Cushion cuts out wheel wobble to a high degree. In addition, the engineers declare that a vehicle fitted with Dunlop cushions on the front wheels will be much easier to steer.

The design of the Dunlop cushion is highly individualized. Through the center of the tire is a typical Dunlop mileage strip. On each side, and placed at angles, are blocks somewhat of the same pattern as those on the standard Dunlop solid non-skid. These blocks serve to grip the road. The sides of the Dunlop cushion were constructed so that when the tire is loaded there will be no undue bulge.

The cushion—or air channel— of the tire, which runs through the center of the base just above the corrugated rim on which it is mounted, has been proved Dunlop engineers aver, to eliminate the hot spot or region of fatigue which in the ordinary solid is apt to be the point first over-taxed.

The compound of the Dunlop Cushion is the same, President Germain says, as that found in the famous Dunlop solid which has been used by truck owners the world over for many years. This compound, plus the cushion, Dunlop experts state means that the tire has fifteen percent more resiliency than most solid tires.

## Kelly-Springfield Pays Notes

Announcement was recently made that officials of the Kelly-Springfield Tire Company, New York, N. Y. had anticipated the payment of notes due May 15, 1924 and had deposited $500,000 in cash with the Central Union Trust Co. of New York to cover this item. The fact that these notes had been anticipated led to a pronounced rally in Kelly-Springfield securities on the Stock Exchange notes which will be drawn by lot by the Central Union Trust Co., trustees of the sinking fund, or or before April 10, 1924, represent the only immediate outstanding obligation of the Kelly company.

## Triangle Starts Production

According to Raymond W. Kent, vice president in charge of production, the recently organized Triangle Tire & Rubber Co. has started production at its plant at 1212-7th St., S. W., Canton, Ohio, the factory formerly occupied by the Gordon Tire & Rubber Co. Originally the company selected the name Canton Tire & Rubber Co. but later found it necessary to change the name to The Titan Tire & Rubber Co. When another change of name was found necessary the present name was selected.

At this writing the plant has been on a production basis for several weeks. Production for the present will be confined exclusively to fabric and cord tires although other lines will probably be added later.

The new company is a $250,000 close corporation controlled by Canton men. Officers are G. S. Shaeffer, president; John Schubach, vice president; Raymond W. Kent, vice president and general manager; and John Quinn, treasurer.

## Goodyear to Redeem Bonds

Goodyear Tire & Rubber Company has announced that $750,000 of its first mortgage twenty year 8 per cent sinking fund gold bonds would be redeemed on May 1, 1924.

The bonds designated for redemption are payable on May 1, 1924, at the principal office of the Central Union Trust Company, of New York, or at the principal office of the Union Trust Company, Cleveland, upon presentation and surrender of the bonds at 120 per cent of the principal amount thereof and the interest accrued to May 1, 1924.

## Rosenfeld with Smith Chemical

The Smith Chemical and Color Company of 257 Water St., New York City, importers and manufacturers of dry earth colors, pigment fillers and specially prepared chemicals, recently announced the appointment of Edward N. Rosenfeld to its sales staff. Until a short time ago, Mr. Rosenfeld was connected with the sales department of the Harmon Color Works, and also was formerly technician for the G. Seigle Corporation of America. He will handle a complete line of dry colors, pigment fillers and chemical specialties for use in the manufacturing of paint, rubber, linoleum, printing ink, and allied industries.

## Tire Production Increases

Under date of March 27 The Rubber Association issued a statistical bulletin showing that 3,887,959 tubes were produced in January, 1924, as compared with 3,951,885 in the same period last year. This is a decrease of 1.6 per cent. 1,941,314 cord tires were manufactured in January, 1924, which, compared with 1,608,889 in January, 1923, shows as increase of 20.7 per cent. The figures for fabric casings for January, 1924 show a decrease of 15.8 per cent when compared with the same period last year.

# M.A.M.A. BOARD REPORTS UNCERTAIN BUSINESS

**Statement Issued Reports that General Business of Country is Adversely Affected by Failure of Congress to Pass Constructive Legislation.**

Following the Board of Directors Meeting of the Motor & Accessory Manufacturers Association held at the Directors room, Association Headquarters, Fisk Building, New York City, on March 28th, President Griffin made the following statement in regard to business conditions:

"The business situation of today is a two sided picture. Manufacturers of certain commodity lines that are marketed to the general public have not experienced the increase of commitments and sales for March and the first part of April that was expected and seemingly warranted by the February conditions and approaching Easter season.

"Keen competition brought about by excess productive capacity in many lines has tended to hold prices level or brought some reductions not warranted by cost conditions. This condition seemingly has failed to stimulate retail buying, although it is reported that the prominent mail order houses have enjoyed a marked increase in business.

"Purchasing seems unduly sensitive to weather conditions. Failures show increases and money is not as cheap as some time since, as reflected by Federal Reserve Ratios.

"The consensus of opinion of the Board of Directors is that the general business of the country is being adversely affected by failure of Congress to pass constructive legislation. The people have rightly expected that the tax program would have been definitely settled by now.

"There is some falling off in orders and commitments in the automotive accessory field but so far this year the business as a whole is as good or better than last year for like period. A let-up perhaps should not have been unexpected as a condition exists today where the rush of spring demand for motor vehicles has been largely anticipated and provided for by many of the larger producers. Stocks of vehicles of many makes are in hand to care for prompt deliveries to the user, avoiding the delayed conditions of other years.

"We believe a reasonable balance between optimism and conservatism should be maintained. Safeguards should be thrown about any tendency to accumulate a stock of materials or finished parts beyond reasonably firm orders. Inventories should be held down to a close working minimum, with the most rapid possible turnover from raw materials to shipment of finished goods, and a constant study of productive costs to the point of maximum efficiency.

"The sale of vehicles will undoubtedly be large in the late spring months and probably within thirty days the duration of the present breathing spell can be measured more accurately."

# World Tire Production and Export Trade

By E. G. Holt

*Rubber Division, United States Department of Commerce*

DURING 1923, the production of casings for motor cars and motor cycles in the principal tire manufacturing countries of the world reached an estimated total of 54,520,000, the United States, which has 80 per cent of the world's automobiles within its borders, producing about 46,000,000.

The total exports of automobiles and motor cycle casings from the leading tire manufacturing countries is estimated at 4,638,000 in 1923, compared with 3,961,000 in 1922. The United States exports of automobile casings numbered 1,325,753 in 1922, and increased to 1,362,741 in 1923, but the percentage of the total export trade supplied by the United States declined from 33.5 per cent in 1922 to 29.4 per cent in 1923. Although the United States did this very creditable share of the export tire trade of the world in 1923, the number of automobile casings shipped abroad was only about three per cent of the tire production of the country. The answer lies in the fact that there are more than 13,200,000 passenger automobiles in the United States while all the rest of the world has about 2,280,000.

## Foreign Manufacturers Dependent on Exports

As contrasted with the American tire industry with its 1923 production of 46,000,000 casings and exports of 1,362,741, foreign manufacturers are estimated to have produced 8,520,000 casings for motor cars and motor cycles during 1923, and to have exported 3,275,000, or 38 per cent of them. France was dependent on export markets for the disposal of 50 per cent of her production; Italy nearly 75 per cent; Great Britain 21.5 per cent; Germany 36 per cent; and Canada 28.6 per cent. In view of the fact that foreign manufacturers are using every effort to retain a trade which means so much to them, tire prices in some export markets have been reduced to levels even below those in the United States. When it is considered that Aemrican manufacturers have to meet the low prices of competitors in export markets and in addition have often to pay greater transportation charges and heavier customs duties than competitors in shipping to the best markets, it is surprising that the American exports constituted so large a portion of the world export trade as was the case in 1923.

## French and Italian Firms Principal Competitors

French manufacturers are the chief competitors of Americans in the export tire trade. They supplied approximately 30 per cent of the total volume of exports in 1923, with shipments of about 1,400,000 casings. The dominating firm in the French export trade, Michelin & Co., exports from both its home factory in Clermont-Ferrand and its Italian factory at Turin. American manufacturers export both from their United States and Canadian factories. The Italian and French tire exports combined were about equal in volume to the United States and Canadian exports; these four countries together accounted for 80 per cent of the export tire business in 1923.

## Tire Exports Estimated for 1922 and 1923

The following table gives carefully prepared estimates for exports, production, and production capacity in 1923, for the principal tire manufacturing countries outside the United States. Estimates of tire exports during 1922 from each country are also shown. French, Italian, Canadian, German, British, and Belgian exports all increased notably in 1923 as compared with 1922; Australian, Japanese, and Austrian exports decreased. The number of automobile casings exported from the United States in 1922 was officially reported as 1,325,753 and as 1,362,741 in 1923; thus there was a slight increase in the American trade during 1923, although American shipments were made from Canadian branch factories to an increasing extent.

Official trade statistics show exports of automobile casings from Germany in 1922 as 191,642, and 251,767 in 1923. The United Kingdom is officially reported to have exported 270,721 casings for motor cars and 72,481 casings for motor cycles in 1922. For Great Britain in 1923, and for other countries except Germany in both 1922 and 1923, the estimates of exports are based on official statistics either of weight or value, which are available for most of the countries. In 1922, the Rubber Division made an analysis of world trade in rubber tires of all kinds, but the estimates of world trade in motor car and motorcycle casings given below are the first ever published, so far as is known:

***Exports, Production, and Production Capacity, of Casings for Motor Cars and Motor Cycles, Estimated for Principal Foreign Manufacturing Countries***

| | 1922 Exports Number | 1923 Exports Number | 1923 Production Number | 1923 Production Capacity Number |
|---|---|---|---|---|
| France | 1,125,000 | 1,400,000 | 2,800,000 | 3,500,000 |
| Italy | 345,000 | 450,000 | 650,000 | 850,000 |
| Canada | 375,000 | 500,000 | 1,750,000 | 2,500,000 |
| Great Britain | 343,000 | 430,000 | 2,000,000 | 3,500,000 |
| Germany | 192,000 | 250,000 | 700,000 | 1,200,000 |
| Japan | 160,000 | 130,000 | 200,000 | 250,000 |
| Belgium | 36,000 | 75,000 | 120,000 | 225,000 |
| Australia | 35,000 | 25,000 | 250,000 | 400,000 |
| Austria | 24,000 | 15,000 | 50,000 | 75,000 |
| Total—Foreign | 2,635,000 | 3,275,000 | 8,520,000 | 12,500,000 |
| United States | 1,326,000 | 1,363,000 | 46,000,000 | ..... |
| Total for World | 3,961,000 | 4,638,000 | 54,520,000 | ..... |

## Basis of Estimates of Production

In estimating the 1923 production of casings for each country, consideration was given to the registration of passenger cars and motor cycles as reported by the Automotive Division of the Bureau of Foreign and Domestic Commerce (see table below), the number of tires imported, the number exported, and the original equipment needs for locally produced automobiles and motor cycles. For Canada, the production of automobile casings in 1922 according to the Dominion Bureau of Statistics, was 1,482,796, and of motor cycle casings 22,682. The only foreign country for which 1923 statistics of production for motor vehicles are available is the United Kingdom, where during the year 65,000 passenger cars, 25,000 trucks, and 45,000 motor cycles were produced, according to a statement furnished by the Society of Motor Manufacturers and Traders, Ltd., of Great Britain. The following table shows the automotive registration in the various countries as of January 1, 1924.

***Automotive Registration in Tire Manufacturing Countries***

| | Passenger cars | Motor trucks | Motor cycles |
|---|---|---|---|
| France | 352,259 | 92,553 | 56,222 |
| Italy | 45,000 | 30,000 | 50,000 |
| Canada | 554,874 | 87,697 | 23,400 |
| Great Britain | 469,490 | 173,363 | 430,138 |
| Germany | 100,329 | 51,739 | 59,409 |
| *Japan | 11,000 | 7,500 | 4,594 |
| Belgium | 45,000 | 12,000 | 28,250 |
| Australia | 109,157 | 8,934 | 51,085 |
| Austria | 10,743 | 3,582 | 4,536 |

*Revised since Automotive Division statement was issued.

## Basis of Estimates of Production Capacity

In estimating the 1923 production capacity consideration was given to the relative activity of the tire industries in the various countries, to the general economic conditions in each country, and to the seasonal nature of the tire trade in Canada. A comparison of the estimated production and the production capacity will show that the French industry is estimated to have produced at 80 per cent of capacity in 1923, while British manufacturers were producing at approximately 57 per cent, etc. While it is intended to show the relative activity of the tire industries in the various countries rather than the actual production capacity, it is believed that the estimates are conservative, and that the production capacity of foreign tire manufacturers would total at least 12,500,000 tires per year.

# Water Dispersions of Rubber and Rubber Compounds

## Italian Patent Granted on Pratt Method of Dispersions—Two Classes Described — In Water and in Other Solvents

*By* **John B. Tuttle**

THE following is an abstract taken from the Italian patent dated Dec. 12, 1923, No. 225,949; N. 19, Vol. 567, granted to William Beach Pratt of Wellesley, Mass., covering water dispersions of rubber and rubber compounds and similar materials.

The object of this invention is stated to be to disperse crude or coagulated rubber in water so as to produce a mass of such consistency as may be desired, in which the rubber is in the form of globules of substantially the same size and form in which they occurred in the original latex, from which the crude rubber was coagulated.

### The Theory of W. B. Pratt

Pratt advances the theory that the original globules of rubber in latex preserve their identity during the subsequent coagulation, and possibly even after vulcanization, and that though during coagulation they become mechanically adherent to form a coherent mass, yet they are capable of separation and dispersion. According to this theory, when rubber is dissolved in a solvent, the solution is effected by means of the absorption of the solvent by the rubber globules until the interfacial tension is lowered to the point where these globules separate from each other.

Crude rubber is known to contain substances other than the rubber hydrocarbons, and it is stated that these non-rubber substances form a film which surrounds the globules of rubber. Thus in coagulated rubber there would be a disperse phase of rubber hydrocarbons, and a continuous phase of non-rubber substances. The function of these non-rubber substances, or at least of part of them, is to provide a protective film or coating while the rubber is in the form of latex, and by means of which the dispersion is maintained during coagulation, when this protective coating becomes mechanically adherent. Some of these substances are soluble in water, and it is believed that the swelling caused by the absorption of water by crude rubber is owing to the rehydration in part of these substances.

Pratt concludes that if his theory be sound, then it should be possible by introducing water into a rubber mass, to restore the functions of the protective coatings, and thus enable the globules to be re-dispersed.

As a matter of fact, whether or not Pratt's theory is correct has nothing to do with the actual discovery of the methods leading to the dispersion of rubber; but it is of more than passing interest as showing the line of thought which lead to the discoveries which are covered in this patent.

### Two Classes of Rubber Dispersions

The patent gives two distinct classes for producing rubber dispersions (a) the coagulated or crude rubber is dissolved in a solvent, such as benzene, and the solution emulsified or dispersed in water, the solvent removed, preferably in a vacuum, leaving the rubber globules in a state of dispersion; (b), water is introduced into the rubber, and the mass is dispersed in water. For all practical purposes, the product from these two classes is the same, i. e., a dispersion of crude rubber in water, in which the globules of rubber are of approximately the same size as they exist in latex, these globules being coated with a protective film of some lubricating substance. The lubricating substance may be soap, saponin, soap bark extract, certain water soluble oils, and substances of similar nature.

In the first class two types are recognized: first, the rubber is dissolved in a solvent, and a soap formed *in situ;* second, a soap or lubricating solution is stirred or kneaded into a solution of rubber. In either case, the solvent is removed by evaporation, preferably in vacuo. The removal of the solvent concentrates the dispersion, but the latter may be diluted to any reasonable extent without effecting recoagulation. Instead of using only crude rubber, a compound can be formed on the regular rubber mixing rolls, by the addition of sulphur, accelerating agents, oils, waxes, pigments, and the like, and a cement made from such compounds is dispersed in the same manner as in the case of crude rubber.

Dispersions obtained by means of these procedures obviously carry the objection that they are more or less of a fire hazard; they require some method for recovering the solvent in order to lessen the cost of obtaining dispersions and the time required is greater than could be desired. However, these objections, if at all valid, do not apply to the procedure of class (b), in which no solvent whatever is used. The steps in this process indeed follow closely the argument which Pratt uses in his theory of coagulation viz., coagulation is the rupturing of the lubricating nature of the protective coatings of the rubber globules in the latex and crude rubber is obtained from such a coagulated mass by removal of water. To re-disperse such material, the steps are reversed; water is introduced into the rubber and when the protective coatings of the rubber globules are rehydrated, a lubricating substance is introduced which enables the globules to slip over one another and be separated from each other.

### Solubility of Crude Rubber

Ordinary crude rubber has such a small percentage of substances soluble in water, or which absorb water, that the introduction of water into such a material is effected only with difficulty. When it can be done, considerable time is required, but the time element can be greatly reduced by adding to the crude rubber, certain water-carrying substances, such as glue, albumin, casein, gum arabic, sugars, glutens, starches, dextrin and similar substances. The addition of these substances is not essential to the process, particularly in such rubbers as Fine Para and slab rubber, which already have an appreciable amount of water-soluble substances. Their use merely affects the time required to introduce water into the non-rubber substances surrounding the rubber globules. Sufficient water can be introduced into the crude rubber alone, if sufficient time and manipulation are employed.

After the water has been introduced, the dispersion is effected by the introduction of a lubricating substance in solution in water. Pratt gives the following example: 550 parts of coagulated crude rubber, such as "smoked sheet," is placed on a regular rubber mixing or compounding mill, and is milled until the rubber becomes warm and plastic. To this add 27.5 parts (by weight) of glue (representing 5% by weight of the mass of the rubber), and the mixture is milled until the glue is thoroughly incorporated in the rubber which is used may be any of the commercial water-soluble glues, and it may be added either in the dry granular form or else in the form of a thick paste made by heating together the glue with a small quantity of water. The rubber-glue mixture is then transferred to a suitable mixing machine such as a two-blade dough mixer, sufficient water to bring the total water content to about 10% by weight of the rubber is added, and the mixer is covered and is then allowed to run until the rubber has

absorbed all of the water. During this operation of absorption of water by the rubber, the latter becomes quite warm. A solution of one part of saponin to two parts of water, is prepared. Of this solution, take 22.5 parts by weight, representing 5% of saponin and 10% of water, both percentages based on the weight of the rubber, and after heating, add the same slowly until the rubber mass assumes a putty like condition. The balance of the saponin solution is gradually added, and the entire mass finally and gradually diluted with approximately 250 parts of hot water. The mixing is continued until the water is thoroughly incorporated throughout the mass, whereupon it will be found that a smooth paste is produced in which the rubber has been dispersed in the form of globules. This rubber dispersion may be stored in this condition, or it may be diluted with water to any desired consistency.

It is of course understood, that the materials used in obtaining dispersions, as well as the percentage of these substances, may be varied greatly. Microscopic examination of the dispersions shows that the rubber globules are of about the same size, and the same general appearance, as the rubber globules in latex.

In this latest procedure as in the two first mentioned (in which solvent is employed), it is possible to compound with the crude rubber, any desired fillers, oils, sulphur, accelerating agents, etc., on the usual rubber mixing mill, and disperse the compound thus formed in the same manner as crude rubber. Thus in any of the products obtained from any of the methods of dispersion, described in this patent, they may be used with or without vulcanization, as desired, and if a vulcanized product is desired, it is only necessary to make the proper provisions therefor in the preparation of the compound. In other words, putting rubber or rubber compounds through the dispersion process does not alter the possibility of vulcanizing the products by any known cold or hot method of vulcanization.

The patent mentions some of the uses to which this invention may be put, such as its use in spreading, in the manufacture of cements, for the introduction of rubber and other substances into paper, in leather manufacture, either as a filler, as when it is used as a fat liquor, or as a surface coating; in tree surgery, for covering wounds in trees, and in making grafts; as a binder in making rubber tile, floor coverings, etc.; in the manufacture of wearing apparel such as raincoats, gloves, shoes, etc.; in the manufacture of chewing gum, etc.

While the patent does not pretend to mention all of the possible uses that now exist or may be developed, it is evident that with the discovery and production of a new plastic, it will be found to be avilable for use for a great variety of purposes.

Sixteen claims are allowed in the patent, covering broadly the processes by which the materials are dispersed, the products of such dispersions, and the uses to which these products may be put.

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# Material Produced by the Pratt Process

## John B. Tuttle Says Process Produces an Aqueous Dispersion and Not an Aqueous Solution of Rubber as Claimed by P. Alexander

IN a letter to the Editor, John B. Tuttle, well-known chemical engineer of New York City, discusses the Pratt Dispersion Process. He says that Paul Alexander, writing in the December 14th issue of a chemical paper published in Germany, failed to give full consideration to the nature of the material produced by the Pratt process and that he was misinformed regarding the nature of the aqueous matter which comes through. Mr. Tuttle's letter is reproduced in full below:

In the December 14th, 1923, issue of *Chemiker Zeitung*, there appeared an article by Paul Alexander in reference to the Pratt Dispersion Process, in which he makes a plea for priority in producing aqueous *solutions* of crude rubber.

It seems quite apparent that Alexander has no real appreciation of the nature of the material which Pratt produces, for in the articles previously written by me and referred to by Alexander, I described the Pratt process as producing an aqueous dispersion and not an aqueous solution of rubber. The Pratt process does not give us an aqueous solution, the "solution" cannot be filtered, and the process is not one for the reclaiming of vulcanized rubber; on the contrary it is a process for the dispersing of coagulated rubber in extremely fine particles, in water, these particles being prevented from coagulating by the presence of a protective coating, but being capable of recoagulation by the employment of the usual coagulating agents.

Alexander's work was not unknown to the writer at the time of writing the articles published in the India Rubber World 67, 213; 68, 488: (1923). A careful study of it had been made, and it seemed quite obvious that in neither method of procedure, nor in the products obtained, was his process like that of Pratt.

The British patents 14,681 (1905) and 25,735 (1906) may be used as fairly descriptive of Alexander's process; these being taken inasmuch as the translation is unquestionably satisfactory to the patentee, and should be supposed to define accurately the process, products and claims.

In Patent No. 14681, he describes the process as follows: 1000 kgs. of caoutchous waste are heated to 150 C. together with 3000 kgs. of benzene during from 3 to 4 hours in a closed vessel under pressure. The undissolved constituents are then mechanically removed, the solution is returned to the pressure vessel and is heated to 150 C. for some time, say 3 hours, with 200 kgs. of sodium hydrate in 350 kgs. of water. The solution is then introduced into a retort, and is treated with steam as long as benzene passes off. The steam distillation must be conducted in manner that a considerable portion of steam condenses in the vessel. The aqueous solution thus produced is filtered or separated by settling from mechanical impurities. If it is desired to separate the caoutchouc material from this solution, which can be used for the above purposes, it is precipitated by the addition of acids or by combustion gases. The same process is employed when using raw caoutchous or other initial materials, it is only necessary to vary the quantity of the solvents and of the alkali somewhat according to the nature of the material employed."

In Patent No. 25,735, this process is varied slightly; for after heating with caustic soda, he proceeds as follows:

"The mass produced is then brought into a distillation vessel together with an equal weight of water, and steam is led in. The benzene distils off and there remains a viscous mass of the caoutchous and an aqueous alkaline liquid. The liquid can easily be poured off from the caoutchous mass. The viscous mass is then heated with any suitable proportion of water, such as 9 times its weight, for several hours under 3 to 4 atms. pressure. There is produced an aqueous solution of caoutchous which may be applied in any desired manner, and from which the caoutchouc may be precipitated by agents such as acids, chimney gases or the like."

The principal difference between these two methods is that in the first, the mass which is transferred to the distillation vessel contains only 350 kgs. of water while the amount of water in the second case is over 4000 kgs. From these processes he claims to obtain unvulcanized rubber in a condition that it is soluble in water, and from vulcanized rubber, a product which is soluble in benzene even before the caustic is added.

Alexander should know that crude rubber is not soluble in water, yet he speaks of the material which he obtains as being a clear solution, capable of being filtered. Further-

*(Concluded on Page 18)*

# Retaliatory Measures Might Result From Common Purchasing Agency

## So State a Number of Prominent Rubber Executives in Commenting on Secretary Hoover's Buying Plan

COMMENTS from leading executives of the rubber industry on Secretary Hoover's plan of a centralized purchasing agency for crude rubber and other raw products, as outlined in our last issue, leans very decidedly towards a feeling that at the present time such action is unnecessary in view of the satisfactory working of the Stevenson plan and that a common buying power on the part of American manufacturers might result in the common selling on the part of our suppliers. It is however believed by some that the legislation which is proposed is desirable as a means of self-protection so that no time would be lost in organizing collectively, as buyers, to meet any discrimination or unfair practices on the part of people of other nationalities controlling the supply of rubber or other basic materials.

A quite different attitude is, however, taken by the newspaper press in general. With only a superficial knowledge of the real attitude of the rubber industry on the Stevenson plan, newspapers have naturally favored Secretary Hoover's plan as one which would " meet foreign combinations on their own ground—monopoly against monopoly." Other papers have suggested that the proposal "is worth consideration by Congress and the industrial leaders of the country, but an even better method to break the foreign monopolies on raw materials is to create new sources of supply controlled by Americans."

### British Criticize Hoover Plan

From London comes criticism of the common purchasing agency plan. A cable to the *New York Times* quotes a statement in the *London Times* to the effect that Secretary Hoover is "badly informed on the subject" and that production of rubber in the British colonies is subject to legislative enactment but that the price is not. The cable, dated March 23 is as follows:

"The proposal moved by Secretary Hoover that Congress should permit the extension of the Webb-Pomerene act to allow the formation of common purchasing agencies for certain imported raw materials at present controlled, it is alleged, by foreign monopolies, has naturally provoked considerable criticism in this country," says *The London Times* financial editor.

"His reference to rubber as coming within this category is very unfortunate, for it shows him to be rather badly informed on the subject. It is true that the production in the British colonies is restricted by legislative enactment, but the price is not. In fact, the price is rather lower than it was when compulsory restriction by legislation came into force over a year ago, while the decrease in the British production was more than made good by the increase in the Dutch.

"Such recovery as has taken place in the price since the Summer of 1922 is due to the increased consumption, particularly in the United States.

"Rubber producers have suffered and continue to suffer from the fact that the buyers of rubber are sensibly fewer than the sellers. As Mr. Hoover gives them the credit of controlling the price of rubber, why should they not seek to justify his belief, for he may conceivably persuade Congress to act upon the assumption that he is correct."

### Comment of American Executives

Executives of American rubber plants, in a number of letters to the Editor of THE RUBBER AGE, have taken the stand in several cases that a common purchasing agency is not needed and in most cases would be decidedly detrimental to our interests. As far as the Rubber Association of America is concerned no statement has been deemed necessary in view of the number of conferences already held with Secretary Hoover on this and allied questions. Regardless of what action is taken by Congress it is felt that such legislation is not compulsory and need only be put into effect should conditions warrant it. Such a state of affairs is not expected however, for it is rather generally agreed in the trade that the Stevenson plan of restriction of rubber production has not worked to the disadvantage of the American manufacturer but has, in fact, stabilized production and insured a steady supply at fair prices.

The following comments are taken from letters received from a number of rubber executives and it is felt at this time that it is unnecessary to give the names of the individuals quoted in view of the almost unanimity of opinion in regard to the plan.

### Statements of Crude Rubber Men

A prominent crude rubber broker asks, "Why bother about the plan at all?" He believes that the greatest need of the rubber industry at this time is higher prices for finished products and that a lower price on crude is not advisable. His statement is as follows:

"Without stopping to consider the feasibility of the plan, why bother about it at all? Under the present restriction plan the American manufacturers of rubber articles have a plentiful supply of crude rubber at a low price with no present reason to think that there will be any shortage or run-away price in the future. It is quite generally understood that the present need of the manufacturers is an increased price for their products. That a further reduction in the price of rubber would be helpful in attaining that end is not easily apparent."

No control of crude rubber exists in the sense meant by Secretary Hoover, according to a leading rubber importer. It is possible, continues this rubber man, for anyone desiring to buy rubber in London, New Amsterdam or in the Eastern primary markets, to find plenty of people, acting independent of each other, in a position to sell them. The statement follows:

"I doubt very much, as far as rubber is concerned, the effectiveness of a common purchasing agency. In the first place, I do not think any such thing as a combination in control in the sense meant by Secretary Hoover exists with crude rubber. What does exist today is legislation passed by certain Colonial Governments in the East, which limits the amount of rubber the various estates and producers (of which there are many thousands) can export.

"This seems to me to be quite a different situation than a combination controlling the selling of the product, for anyone desiring to buy rubber in London, Amsterdam, or in the Eastern primary markets, can find plenty of people, acting independent of each other, in a position to sell them."

### Opinions of Rubber Manufacturers

A prominent New England tire manufacturer, acting in belief that Secretary Hoover is asking only for permissive legislation to be placed on the books in case of an emergency, states:

"I certainly favor Mr. Hoover's plan. I do not understand that Secretary Hoover believes that there is an emergency on crude rubber today that would make him want to act under this permissive legislation."

The president of one of the large Akron tire plants believes that a central buying agency is desirable in order that our defenses may be ready to meet any discrimination or unfair practices. He however states that Americans have not suffered from British control but have benefitted from the fact that a collapse of planting interests has been averted. His complete statement follows:

"I believe that legislation looking toward centralized buying is desirable, so that no time would be lost in organizing collectively as buyers to meet any discrimination or unfair practices on the part of people of other nationalities controlling the supply of rubber or other basic materials.

"British control of rubber has not been exercised unfairly or to the detriment of American manufacturers up to date. On the other hand, it has prevented a collapse of planting interests in the Orient and the reversion of many rubber plantations back to jungle.

"For this reason, American rubber manufacturers and the American public have been distinctly benefitted by the operation of the rubber regulation policy of the British.

"It must not be lost sight of, however, that such power over imported raw materials might easily be used against us, and our defenses should be built up ready to meet such a policy in case it should be put into effect."

### Might Result in Retaliatory Measures

A Trenton rubber manufacturer states that commercial strife and retaliatory measures may be the result of a common purchasing agency on our part. He writes in part:

"One thought that occurs to us in this connection, is that a combination of interests for collective buying might naturally invite a combination of interests for collective selling, and such a condition might result in commercial strife and retaliatory measures."

A similar thought is expressed by another large Eastern manufacturer when he states that a common buying power on our part might result in the common selling on the part of our suppliers. He does not believe that the Stevenson plan is entirely satisfactory but states that the old law of supply and demand will ultimately solve the question of the proper prices at which crude rubber can be profitably grown and sold. The statement is as follows:

"...It seems to me that there is great danger in a suggestion of this kind (Hoover's common purchasing plan—Ed.) from many angles. One is that perhaps a common buying power on our part might result in the common selling on the part of our suppliers.

"In commodities that run into the varied production and the quantity production that rubber does with the various requirements, I cannot conceive, at this moment, of a workable plan.

"Regarding the Stevenson plan that is in effect today, I do not believe this is wholly satisfactory to the American manufacturer but regardless of any plan, we all know that the thing that is essential for development is to have the industry put on a profitable basis. If the Stevenson plan will insure the development of plantations I would think that it could not help but be ultimately successful.

"There does not seem to me to be much difference of opinion on that point, the only difference is in some believing that rubber can be grown and sold at a profit at from fifteen to twenty cents a pound and others from twenty-five to thirty cents.

"The advancement of the art and the old law of supply and demand will ultimately solve that question."

It would be interesting to have been able to obtain the opinion of H. S. Firestone on this question but as he is on a trip to Florida at this writing he could not be reached in time for a statement in this issue.

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# Material Produced by the Pratt Process

(*Continued from Page* 16)

more, vulcanized rubber is not soluble in any known solvent without undergoing a depolymerizing process, yet he speaks of separating the mineral constituents from vulcanized rubber by filteration of the rubber after the treatment with benzene only.

It is not necessary to use high temperatures, such as 150 C., to effect the solution of crude rubber in organic solvents; given the proper type of equipment, such as the two blade dough mixer the solution can be obtained in an hour at ordinary room temperatures. It is only a reasonable and fair conclusion, that if the process calls for heating in the presence of a solvent for from 3 to 4 hours at 150 C., depolymerization takes place, and this change is desired by Alexander. With Vulcanized rubber this is at once obvious, for in no other way could the rubber be put into solution, a condition necessary of the rubber is to be concentrated by the filteration of the mineral pigments. The situation is almost as obvious with unvulcanized rubber, since it is desired that the product obtained by heating with a solvent for 3 to 4 hours at 150 C., and for 3 hours at 150 C., with caustic soda, shall be soluble to a clear solution in water.

By treating crude or unvulcanized rubber according to Patent No. 25,735, it is necessary to heat the viscous mass for a still further period of 3 hours at 150 C. (3 to 4 atms. pressure) before getting a water soluble product. Thus, according to patent 14,681, the rubber is heated altogether for 7 hours at 150 C., and according to 25,735, for 10 hours at 150 C., to effect solution in water.

This treatment for a prolonged period at temperatures above the usual vulcanizing point, is not only not called for in the Pratt process, but is undesirable, and unnecessary. Here the rubber is kept at as low a temperature as possible in order to avoid the least amount of "depolymerization" such as is well known will result from heating rubber in the presence of solvents. Even when removing the solvent, precautions are taken to keep the temperature at a low point, it being recommended by Pratt that the solvent should be removed by heating the dispersion in vacuo. The dispersions are never boiled.

Alexander speaks of the ease with which pigments can be removed by his process. It is true that in the Pratt process this is not possible; but it was never intended that this should be so. On the contrary, it was Pratt's discovery that not only crude rubber, but the ordinary rubber compounds could be dispersed in water by his process. In the Pratt process, it is desirable that the sulphur, oils, waxes, gums, mineral pigments, organic accelerators, and the like materials used in making commercial rubber compounds, be maintained in a homogeneous dispersion with the rubber, so that the resulting dispersion may be subjected to the ordinary heat vulcanization after removal of the water.

It is certainly worth while to call attention to the fact that Alexander constantly speaks of solutions, whereas Pratt at no time claims that his rubber is dissolved, but, on the contrary, is merely dispersed in water in particles of practically the same size, and in the same condition of polymerization, as they exist in the crude rubber.

Alexander states that he is able to dispense with the use of oleic acid. It is only in the practice of one particular method of carrying on the Pratt process which calls for the use of solvents, that the oleic acid, or some such soap-forming substance, is used in the production of a soap *in situ*.

The facts in this case are simply that the two processes are utterly unlike in procedure, and in the products obtained.

At the time Alexander wrote his article for the *Chemiker Zeitung*, he could not, of course, have known that Pratt had discovered an entirely new process for dispersing rubber and similar materials in water without the use of any organic solvents whatever and without the use of soap. It is, however, scarcely too early to point out that there is even less, if possible, resemblance between this latest form of the Pratt process, and those of Alexander, than there was between the processes which have been discussed above.

# TECHNICAL ABSTRACTS

**Mechanical** **Chemical** **Physical**

## Coagulation of Latex

Writing in the December, 1923, issue of *The Malayan Agricultural Journal*, W. N. C. Belgrave deals with the methods employed for coagulating hevea latex. Latex as it issues from the trees is known to consist of an enormous number of hydrocarbon globules, for the most part spherical, in sizes varying from 2-0.5 microns, in vigorous Brownian motion, suspended in an aqueous medium which is a dilute solution of nitrogenous bodies, sugar l-methyl inosite and mineral salts. Bodies of a resinous nature are also present, one or more alcohols akin to phytosterol, and a small amount of a lecithin-like substance. Coagulation is usually and generally taken to mean the separation and coalescence of the rubber globules to a coherent, somewhat elastic clot, leaving, when the process is complete, a perfectly clear liquid—serum.

In the article under review Mr. Belgrave considers the temperature and volume changes on coagulation and gives his reasons for believing that no change of state occurs in the action. After an examination of the previous theories he submits evidence that they can be differently interpreted. He considers the conditions necessary for equilibrium and for separation of substances such as latex. After showing that latex satisfies these conditions, he puts forth the theory that coagulation is normally due to an increase in hydrogen ion concentration, which may be brought about by bacterial action, and that the phenomena met with may be explained by the assumption of an iso-electric region for the protective protein. The resins are shown to be unlikely to function as emulsifiers in normal latex. His deductions are of practical interest.

## Rate of Vulcanization of Plantation Rubber

If rubber latex is coagulated by introduction into three times its volume of alcohol which is maintained at a temperature of 60 degrees C, the rate of vulcanization of the rubber that is formed in this manner—a form of crepe rubber—is distinctly greater than that obtained when the alcohol coagulant is maintained at a temperature of 25 degrees C. When the moist coagulated, raw rubber that is obtained with the use of cold alcohol is matured, a product is secured with a rate of vulcanization greater than that of the original, unmatured rubber, but this cannot be done with rubber that is coagulated by means of warm alcohol. Maturing has no effect on the rate of vulcanization.

When alcohol adjusted to $p_H$3, 7 and 9 respectively is employed in the experiments, the increasing value is accompanied by an increased rate of vulcanization both in the case of matured and unmatured rubber.

These effects are not due to the mere chemical effect of the alkali or acid that is present in the coagulant nor to any selective action of the alcohol on certain non-rubber constituents under the various conditions. Insoluble nitrogenous matter separated from depolymerized rubber, when introduced into crepe rubber, had no accelerating effect on the vulcanization of the latter. A more effective accelerating agent can be produced by aerobic than by anaerobic decomposition of the natural protein or of the serum residue. The extent to which vulcanization can be expedited by the addition of serum solids or their decomposition products is limited.

Artificial organic accelerators and protein decomposition products are much more powerful accelerators than the serum decomposition products. The extreme limit of acceleration by natural means is represented by evaporated whole rubber, which includes all the non-rubber constituents of the latex. The rate of vulcanization of raw rubber, for example, matured rubber, is not reduced by careful washing. The exterior rubber of a matured slab vulcanizes much more rapidly than rubber from the interior.

It was also found that extraction with cold acetone causes an increase in the rate of vulcanization of ordinary crepe rubber, but does not do so for matured rubber which is prepared from the same latex. The evaporation of undiluted latex yields a product with approximately the same rate of vulcanization as matured rubber.

The results are generally held to demonstrate that the nitrogenous constituents of raw rubber are only partly responsible for its vulcanization characteristics and that the rate of vulcanization is seriously influenced by the presence of rubber oxidation products which may be first formed through the agency of a peroxidase in the latex. The labile peroxide which is formed in this manner accelerates vulcanization, but on exposure to air or oxygen, it undergoes further conversion into resinous oxygen compounds of the known type. On the degree of formation of these two types of oxygen compound depends the effect of aging which sometimes results in an acceleration and sometimes in a retardation of vulcanization. (*Malayan Agric. Journal*, volume 11, pages 310 to 334.)

## Rate of Drying of Rubber

The rate of drying of freshlly prepared rubber is reduced by strongly pressing or seriously overmilling the coagulum and by deferring rolling for a day or more. The use of sodium sulphite or sodium bisulphite and coagulation by means of heat or with sulphurous acid, alum, or alcohol also retard the drying process. Keeping fresh coagulum in water or in a moist atmosphere above water or in an atmosphere of coal gas or carbon dioxide also decreases the rate of drying. Even the coagulum from very dilute latex, which normally dries quickly, becomes slow-drying if first kept under water. This alteration in the rate of drying appears to be independent of the hygroscopicity of the rubber which affects only the moisture content of the air-dry rubber. The cause of the phenomenon of slow drying is to be sought in structural changes in the whole mass of the coagulum. (*Comm. Central Rubber Station*, 1923, number 32, pages 7 to 35.)

## Some Constituents of Latex

W. N. C. Belgrave and R. O. Bishop, writing in Vol. XI, No. 12 of *The Malayan Agricultural Journal* under the above heading describe the results of an attempt to effect a rough separation of some of the substances in hevea latex with a view to testing their effects on the rate of vulcanization of rubber and also as a preliminary survey of possible lines along which more detailed work in the future should proceed. They give an account of the separation of serum protein on neutralization; of an alcohol-insoluble nitrogenous body from serum; of the different constituents of the "depolymerized residue"; of the waxy bodies—phytosterols, resin acids and a lecithin-like body from alcoholic liquors.

In order to obtain information on the protein associated with coagulated latex, the authors made attempts to wash it out of recently coagulated rubber by using water, dilute acid, alkaline and neutral salt solutions.

## India Rubber Composition

Instead of mineral ingredients, "cuprene", the solid product obtained by the polymerization of acetylene, for example, in the presence of copper, is incorporated with rubber. The cuprene, which is highly flexible and tough, is employed preferably in a finely divided condition. British Patent No. 192,080.

# RUBBER STATISTICS

**Import** **Production** **Export**

## Shipments of Rubber Manufactures from the United States to Non-Contiguous Territories During the Month of February 1924

| | *Alaska* | | *Hawaii* | | *Porto Rico* | |
|---|---|---|---|---|---|---|
| | Quantity | Dollars | Quantity | Dollars | Quantity | Dollars |
| Boots and Shoes (Pairs) | 160 | 637 | 82 | 155 | .... | .... |
| Canvas Shoes with Rubber Soles (Pairs) | 2,994 | 6,512 | 3,094 | 4,206 | 20,108 | 13,394 |
| Druggists' rubber sundries (Pounds) | 3 | 6 | 734 | 745 | 522 | 917 |
| Automobile casings (Number) | 112 | 3,699 | 2,902 | 46,352 | 1,947 | 31,832 |
| Automobile inner tubes (Number) | 34 | 90 | 3,763 | 7,215 | 2,460 | 4,285 |
| Other tires (Number) | .... | .... | 211 | 486 | 28 | 309 |
| Belting, hose and Packing (Pounds) | 7,074 | 3,353 | 20,263 | 9,689 | 4,410 | 1,454 |
| Other rubber manufactures (Pounds) | 673 | 544 | 11,856 | 6,278 | 18,807 | 7,019 |
| Coated and waterproofed goods (Pounds) | 8,609 | 5,709 | 6,678 | 4,237 | 5,705 | 2,568 |

## Domestic Exports of Rubber Reclaimed, Scrap and Old from the United States by Countries

| *Countries* | *Reclaimed* | | *Scrap and Old* | |
|---|---|---|---|---|
| | Pounds | Dollars | Pounds | Dollars |
| France | .... | .... | 101,854 | 5,184 |
| Germany | .... | .... | 122,730 | 4,727 |
| Netherlands | .... | .... | 11,392 | 456 |
| Spain | .... | .... | 242,419 | 15,603 |
| Sweden | .... | .... | 19,379 | 1,010 |
| England | 63,145 | 6,363 | 27,659 | 1,897 |
| Scotland | 10,454 | 1,020 | 92,239 | 3,219 |
| Canada | 687,459 | 81,948 | 238,579 | 5,648 |
| Japan | 29,818 | 2,260 | 109,895 | 1,185 |
| Total | 790,876 | 91,591 | 966,146 | 38,929 |

## Imports of Crude Rubber, Gutta Percha, and Substitutes Therefor into the United States During the Month of February 1924

| Crude Rubber: | *Pounds* | *Long Tons* | *Dollars* |
|---|---|---|---|
| From: | | | |
| Belgium | 72,209 | ..... | 17,937 |
| France | 209,520 | ..... | 46,769 |
| Germany | 109,249 | ..... | 26,399 |
| Netherlands | 117,327 | ..... | 28,422 |
| England | 9,675,341 | ..... | 2,519,404 |
| Canada | 430 | ..... | 126 |
| Nicaragua | 860 | ..... | 134 |
| Salvador | 117 | ..... | 17 |
| Brazil | 2,852,699 | ..... | 523,044 |
| Chile | 10,703 | ..... | 2,700 |
| Colombia | 30,319 | ..... | 5,871 |
| Ecuador | 314,704 | ..... | 53,021 |
| Peru | 14,165 | ..... | 3,416 |
| British India | 934,857 | ..... | 229,505 |
| Ceylon | 5,189,911 | ..... | 1,311,185 |
| Straits Settlements | 38,400,057 | ..... | 9,566,068 |
| Java and Madura | 4,779,936 | ..... | 1,270,092 |
| Other Dutch East Indies | 7,856,146 | ..... | 2,035,555 |
| Australia | 8,945 | ..... | 2,259 |
| British West Africa | 11,200 | ..... | 2,240 |
| Crude Rubber Total | 70,588,695 | 31,513 | 17,644,164 |
| | 1923 | 1922 | |
| Total Imports of Crude Rubber for the Month of February | 60,379,290 | 66,744,240 | |
| | 26,955 (Long Tons) | 27,797 (long Tons) | |
| Jelutong or Pontianack | 1,039,433 | 464 | 85,423 |
| Balata | 93,578 | 42 | 56,160 |
| Gutta Percha | 450,376 | 201 | 56,577 |
| Guayule | ..... | ..... | ..... |
| Other crude, scrap and reclaimed | 1,119,904 | 500 | 36,636 |
| CRUDE TOTAL | 73,291,986 | 32,720 | 17,878,960 |

# Exports of Rubber Goods from U. S.—February, 1924

### Compiled by the Department of Commerce

RUBBER BELTING, HOSE, PACKING, AND THREAD.

| | Rubber Belting | | Rubber Hose | | Rubber Packing | | Rubber Thread | |
|---|---|---|---|---|---|---|---|---|
| | Pounds | Dollars | Pounds | Dollars | Pounds | Dollars | Pounds | Dollars |
| Totals | 259,505 | 151,601 | 352,305 | 140,092 | 128,657 | 47,146 | 91,819 | 99,475 |

PNEUMATIC CASINGS AND PNEUMATIC TUBES

| | Pneumatic Casings | | | | Pneumatic Tubes | | | |
|---|---|---|---|---|---|---|---|---|
| | For automobiles | | Other | | Automobiles | | Other | |
| | Number | Dollars | Number | Dollars | Number | Dollars | Pounds | Dollars |
| Totals | 89,448 | 1,043,452 | 2,435 | 9,957 | 94,222 | 166,008 | 3,959 | 3,078 |

HARD RUBBER GOODS

| | Battery jars and Accessories | | Other Electrical Supplies | | Other hard rubber goods | |
|---|---|---|---|---|---|---|
| | Pounds | Dollars | Pounds | Dollars | Pounds | Dollars |
| Totals | 38,608 | 15,207 | 10,831 | 6,163 | 17,705 | 19,796 |

WATERPROOFED AUTOCLOTH, RUBBERIZED FABRICS, ETC.

| | Waterproofed Autocloth and Rubberizer Fabrics | | Waterproofed Clothing | |
|---|---|---|---|---|
| | Sq. yards | Dollars | Pounds | Dollars |
| Totals | 212,920 | 130,283 | 71,641 | 59,748 |

SOLID TIRES, ACCESSORIES AND REPAIR MATERIALS

| | Solid Tires | | | | | |
|---|---|---|---|---|---|---|
| | For Automobiles and Motor Trucks | | Other | | Accessories and Repair Materials | |
| | Number | Dollars | Number | Dollars | Pounds | Dollars |
| Totals | 9,424 | 240,283 | 86,182 | 21,478 | 95,446 | 34,208 |

RUBBER FOOTWEAR AND SOLES AND HEELS.

| | Boots | | Shoes | | Canvas shoes with rubber soles | | Rubber soles and heels | |
|---|---|---|---|---|---|---|---|---|
| | Pairs | Dollars | Pairs | Dollars | Pairs | Dollars | Pounds | Dollars |
| Totals | 52,108 | 103,809 | 88,986 | 71,447 | 318,216 | 257,386 | 135,739 | 49,437 |

# MARKETS

## Cottons and Fabrics

NEW YORK, April 1, 1924

During the past fortnight the cotton market was characterized by feverish activity, bearish hysteria and spasmodic buying. In the first week of the period under review prices made new low records when on March 29 the May option traded down to 26.60, which was 237 points off the close on March 21. Even October, in which some resistance to the depressing effect was noticeable, fell below the 23-cent level; but toward the close of that week the old crops made a sufficient rally to cut down the losses of the week to 163 and 185 points respectively. October, which should have been influenced by bad weather and tardy crop preparation, was 200 points lower at the close of that week than at the close of the previous one.

It was the tendency to await reports of the new crop in order to obtain some idea of its probable size, and a hesitant policy was apparent almost in all quarters. Although many causes have contributed to the fall of prices, it was reported that one of the principal influences has been stagnation in the manufactured goods trade. Restricted buying has been the policy of jobbers for some time.

A report from New Orleans said that Russia had been a buyer of spot cotton on March 27; also that all room available for April shipment had been booked for Bremen. Although no bookings of freight room for shipment out of New York were reported, it is expected that the export movement for the next month will be maintained.

In some quarters it was thought that a shortage this fall would be certain. It is pointed out that the American growth is about 400,000 bales in excess of last season and that the yield of other countries is also probably less than last year, bringing the total world production up to about the same figure as last year, yet prices are about three cents per pound lower than the same period in 1923 and the new crop prices also lower.

In a statement issued by C. B. Howard, general sales manager of the American Cotton Growers' Exchange, Atlanta, Ga., he writes:

"Surely the trade cannot have forgotten so quickly the object lesson of this season—an acreage of 38,000,000 producing only slightly over 10,000,000 bales of cotton. What would 10,000,000 mean next season, or 12,000,000? We will have no surplus the end of this season to fall back upon as we have had in the past, and world conditions continue to improve and will continue to improve.

"It is just as sure that trade will work upwards toward its normal as that water will seek its level.

"We know that foreign mills have negligible stocks of cotton, that conditions have forced them to buy in a hand-to-mouth way, that German mills for some weeks have been running full, some at night, and selling most of their production to their own people.

"When the International Federation of Master Spinners issues its report on consumption of foreign spinners, it will likely surprise many who have not thought much of what has become of our large exports, nearly 700,000 bales in excess of last season, and which still continue heavy. The American mill stock March 1 was 440,000 bales below same date last year, and yet their percentage of curtailment is small.

"Methods of selling goods have changed. Distributers no longer carry the heavy stocks they formerly did. There has been and will be no buyers' strike of the ultimate consumer so long as business is good and he has the money to supply his wants. He is otill buying and distributers are certain to supply him.

"All of these admitted facts are temporarily lost sight of and are without present effect. Powerful bears have pounded the market and issued bearish propaganda until they have created a distrust and loss of faith in values, obscured and put in the background the fundamentally bullish conditions and caused converters, wholesalers and retailers, and consequently mills, to anticipate lower prices, and refrain from buying as long as possible and in as limited degree as possible.

"All of this, however, renders the situation increasingly acute. Our Southern speculators too frequently "follow the crowd" and get nipped in the process.

It would seem that Mr. Howard's predictions were about to come true from the conditions of the market toward the last few days of the period under review. A demand for cotton was reflected in a rally of nearly a cent a pound on March 31. Both trade and speculative shorts seemed to have become alarmed over their position on March 31. But except for covering, however, the buying was neither urgent nor general and the advance in later deliveries was retarded by the anticipation of better reports from the domestic goods trade failing to materialize. Both New York and Liverpool spot cotton was firm, with good business reported from the latter.

Quotations, as of March 31, follow:

| | Open. | High. | Low. | Close | Close Mar. 14 |
|---|---|---|---|---|---|
| May | ..27.78 | 28.50 | 27.68 | 28.43@28.50 | 28.02n |
| July | ..26.81 | 27.48 | 36.65 | 27.35@27.40 | 22.30-33 |
| Oct. | ..24.17 | 24.65 | 24.10 | 24.50@24.58 | 27.63-67 |
| Dec. | ..23.93 | 24.21 | 23.75 | 24.20 | 25.32-37 |
| Jan. | ..23.60 | 23.86 | 23.60 | 23.86 | 25.01-06 |

### *EXTRA STAPLE COTTON*

The market for extra staples has been dull for the past two weeks. Pimas, Egyptians and short cotton furnished the only interest for the last few days of the period under review. As the difference between asked and bid prices on short cotton was too great to stimulate trading, Pimas and Egyptians furnished most of the trading inquiry. Ten days ago offering prices on short cotton were 25 points under what holders would consider, and from the South came the news that growers and holders were not finding any great difficulty in disposing of their cotton. Pimas were feaured in some trading; in fact, several houses reported that their business was confined solely to this commodity. In the face of an active demand Pimas are firm in price. So far as the better grades of Egyptians are concerned, they have become largely a shipment proposition. The amount of Egyptian of good grade that is sold on spot is almost negligible. This fact has eliminated the price difference that formerly existed, and spots now bring approximately the same as shipments. Interest during the past fortnight, when compared with normal trade, could not be considered active.

Prices on extra staple cotton, strict middling in grade and color, f.o.b., New Bedford, were quoted today as follows:

| | | | |
|---|---|---|---|
| 1 1-8 | inch, 30 | @ 31 | cents. |
| 1 3-16 | inch, 31 | @ 32½ | cents. |
| 1 1-4 | inch, 31½ | @ 33 | cents. |
| 1 5-16 | inch, 33½ | cents upward. | |

### *TIRE FABRICS*

Little change has taken place in the tire fabric market since our report. The market continues dull with prices firm. It was reported that several Akron tire manufacturers placed contracts for May, June and July deliveries but this could not be confirmed. Those interested in the market express the hope that the manufacture of balloon tires will increase the consumption of tire cords. In the absence of contracts the volume of spot business stands out. Competition is keen for the few large orders that have been placed and are under consideration.

*(Continued on Page 24)*

### SOUTH AFRICAN COTTON PRODUCTION

**Widespread interest is being shown in cotton growing in South Africa. The Empire Cotton Growing Corporation has recently offered to defray the expenses of three specially trained officers to help develop the industry in that country, writes William E. Vaugham, Jr., secretary to the trade commissioner in Johannesburg in a report to the Department of Commerce. Cotton production has been on the increase since 1919; during the 1922-23 season it amounted to 2,400,000 pounds of lint, or about 4,800 bales of 500 pounds each, compared with 1,096,182 pounds for the previous year. The area under cultivation is estimated to be approximately 20,000 acres. Practically all the cotton is exported. South African lint is regarded as good quality by manufacturers in Great Britain, France and Belgium.**

# Chemicals and Compounding Ingredients

**THE INDUSTRIAL CHEMICAL MARKET**—NEW YORK, April 1, 1924—Business in industrial chemicals for the past fortnight has been normal as compared with the same period last year. In some chemicals a steady demand is reported from mechanical goods manufacturers. The cautious tendency manifested by buyers of rubber has effected the chemical market to a degree, but prices of most of the industrial chemicals are firm even in the face of a slow demand. Colors, especially whites, are fairly steady and the business being done compares favorably with that of last month. Sulphur, which was only in routine demand for some days, seems to have been awakened from the lathargy that held it, for much better business in the element is being reported on this date. There is little change in current quotations of many of the industrial chemicals.

## ACCELERATORS

### *Organic*

| | | | |
|---|---|---|---|
| Aldehyde ammonia, crystals | lb. | $ .90 @ | .95 |
| Aniline oil, drums | lb. | .16 @ | .18 |
| Diphenylguanidine | lb. | 1.05 @ | 1.20 |
| Excellerex, | lb. | .40 @ | .45 |
| Formaldehyde-Aniline | lb. | .47½ @ | — |
| Hexamethylene-tetramine | lb. | .82 @ | .85 |
| Paraphenylenediamine | lb. | 1.40 @ | 1.50 |
| Super-Sulphur No. 1 | lb. | .50 @ | .60 |
| Super-Sulphur No. 2 | lb. | .25 @ | .35 |
| Tetramethyl—Thiuramdisulphide | lb. | 6.00 @ | — |
| Thiocarbanilide, kegs | lb. | .26½ @ | — |
| Vulcocene | lb. | .35 @ | — |

### *Inorganic*

| | | | |
|---|---|---|---|
| Lead, sublimed blue | lb. | .09¼ @ | — |
| Lead, white | lb. | .09 @ | .09½ |
| Litharge, domestic | lb. | .11½ @ | — |
| Lime, Superfine | lb. | .01½ @ | .03½ |
| Magnesia, calcined, light, | lb. | .23 @ | .24 |
| extra light | lb. | .45 @ | .60 |
| heavy | lb. | .05½ @ | .06½ |

## COLORS

### *Blacks*

| | | | |
|---|---|---|---|
| Arrow, "Aerfloted" | lb. | .10 @ | .11 |
| Bone Black | lb. | .05½ @ | .07½ |
| Carbon " | lb. | .07½ @ | .09½ |
| Drop " | lb. | .07½ @ | .10 |
| Ivory " | lb. | .15 @ | .45 |
| Lamp " | lb. | .12 @ | .40 |
| Micronex | lb. | .09 @ | .14 |

### *Blues*

| | | | |
|---|---|---|---|
| Cobalt | lb. | .21 @ | .23½ |
| Prussian | lb. | .40 @ | .43 |
| Ultramarine | lb. | .12 @ | .35 |

### *Browns*

| | | | |
|---|---|---|---|
| Iron oxide | lb. | .03½ @ | .06½ |
| Sienna, Italian, | lb. | .06 @ | .14½ |
| Umber, Turkey, | lb. | .04 @ | — |
| Vandyke, domestic | lb. | .03½ @ | .04 |

### *Greens*

| | | | |
|---|---|---|---|
| Chrome, light | lb. | .28 @ | .31 |
| medium | lb. | .30 @ | .35 |
| dark | lb. | .32 @ | .42 |
| Commercial | lb. | .12 @ | — |

### *Reds*

| | | | |
|---|---|---|---|
| Antimony crimson, 15/17 F.S. | lb. | .39 @ | .55 |
| sulphur free | lb. | .45 @ | .60 |
| golden, 15/17 F.S. | lb. | .19 @ | .24 |
| calcium and sulphur free | lb. | .40 @ | — |
| red sulph.15-17 F.S. | lb. | .15 @ | .16 |
| Indian, English | lb. | .11 @ | .13 |
| Para toner | lb. | 1.00 @ | 1.10 |
| commercial | lb. | .16 @ | .18 |
| Red Oxide, reduced | lb. | .08 @ | .12 |
| pure | lb. | .12 @ | .14 |
| Toluidine toner | lb. | 2.00 @ | 2.10 |
| Venetian red | lb. | .02 @ | .05½ |
| Vermillion, quicksilver, English | lb. | 1.22 @ | 1.25 |
| domestic | lb. | .15 @ | .25 |

### *Whites*

| | | | |
|---|---|---|---|
| Albalith | lb. | .07 @ | .07¼ |
| Aluminum bronze | lb. | .55 @ | .60 |
| Lithopone Azolith | lb. | .06¼ @ | .06¾ |
| Zinc Oxide—American Process XX red | lb. | .07⅞ @ | .08⅛ |
| Kadox, black label, bags, cars | | .09¾ @ | — |
| blue " " " | | .09½ @ | — |
| red " " " | | .09¼ @ | — |
| American Azo: ZZZ (lead free) | lb. | .07¾ @ | .08¼ |
| ZZ (under 5 per cent leaded) | lb. | .07 @ | .07½ |
| Z (8-10 per cent leaded) | lb. | .06¾ @ | .07¼ |
| Zinc Oxide—French Process White seal | lb. | .12 @ | .12¼ |
| Green seal | lb. | .10¾ @ | .11¼ |
| Red seal | lb. | .09¾ @ | .10¼ |

### *Yellows*

| | | | |
|---|---|---|---|
| Chrome, light | | .18½ @ | .19 |
| dark and medium | lb. | .18½ @ | .19 |
| Cadmium Sulphide | lb. | 1.75 @ | 2.50 |
| Ocher, French | lb. | .01¾ @ | .03 |
| domestic | lb. | .02¼ @ | .03 |

## COMPOUNDING INGREDIENTS

| | | | |
|---|---|---|---|
| Aluminum Flake | ton | 25.00 @ | 40.00 |
| hydrate light | lb. | .17½ @ | .18½ |
| Ammonia carbonate, | lb. | .09¼ @ | .10½ |
| Asbestine | ton | 18.00 @ | 20.00 |
| Barium carbonate, | ton | 80.00 @ | 90.00 |
| Barium Dust | lb. | .05 @ | .06 |
| Barytes southern off-color, | ton | 15.00 @ | 18.00 |
| Western prime white | ton | 24.00 @ | 26.00 |
| Imported | ton | 30.00 @ | 35.00 |
| Basofor | lb. | .04¼ @ | — |
| Blanc fixe, dry f.o.b. works | lb. | .04 @ | .04½ |
| Carrara filler | lb. | .01½ @ | .02 |
| Chalk, precipitated, extra light | lb. | .04¼ @ | .05 |
| heavy | lb. | .03¼ @ | .04 |
| Clay, China, domestic, | ton | 15.00 @ | 16.50 |
| Dixie | ton | 22.00 @ | 32.00 |
| Blue Ridge | ton | 12.00 @ | 25.00 |
| Fossil flour | lb. | .03 @ | .05 |
| Glues, extra white | lb. | .22 @ | .30 |
| medium white | lb. | .20 @ | .26 |
| cabinet | lb. | .18 @ | .28 |
| cabinet low grade | lb. | .15 @ | .18 |
| common bone | lb. | .11 @ | .15 |
| Graphite flake, bbls. | lb. | .06½ @ | .12 |
| amorphous | lb. | .04 @ | .10 |
| Infusorial earth, powdered | ton | 60.00 @ | — |
| bolted | ton | 70.00 @ | — |
| Liquid latex | gal. | 1.25 @ | 1.35 |
| Magnesia, carbonate | lb. | .08¼ @ | .08¾ |
| Mica, powdered | lb. | .07 @ | .15 |
| Rotten Stone (powdered) | lb. | .02½ @ | .04½ |
| Soapstone, powdered | ton | 15.00 @ | 22.00 |
| Starch, powdered | cwt. | 3.27 @ | 3.54 |
| Talc, domestic | ton | 15.00 @ | 22.00 |
| French | ton | 20.00 @ | 25.00 |
| French, high grade | ton | 40.00 @ | 45.00 |
| Italian | ton | 50.00 @ | 55.00 |
| Terra Alba | cwt. | 1.75 @ | 1.90 |
| Tripoli, white | lb. | .02 @ | .02¼ |
| Whiting, commercial | cwt. | 1.00 @ | 1.15 |
| domestic | cwt. | 13.00 @ | 15.00 |
| gilder's bolted | cwt. | 1.10 @ | 1.20 |
| English cliffstone | cwt. | 1.50 @ | — |
| Paris whiteAmerican | cwt. | 1.25 @ | 1.50 |
| Quaker | ton | 13.00 @ | 15.00 |
| Sussex | ton | 8.00 @ | 16.00 |
| Wood pulp XXX | ton | 35.00 @ | — |
| " " X | ton | 25.00 @ | — |

## MINERAL RUBBER

| | | | |
|---|---|---|---|
| Genasco (factory) | ton | 50.00 @ | 52.00 |
| Granulated M.R. | ton | 50.00 @ | 54.00 |
| Hard hydrocarbon | ton | 30.00 @ | 40.00 |
| Soft hydrocarbon | ton | 30.00 @ | 40.00 |
| 320/340 M. P. hydrocarbon (c. l. factory) | ton | 45.00 @ | 50.00 |
| 300/310 M. P. hydrocarbon (c.l. factory) | ton | 40.00 @ | 45.00 |
| Synpro, granulated, M. R. (factory) | ton | 55.00 @ | 70.00 |

## SOFTENERS

### *Acids*

| | | | |
|---|---|---|---|
| Acetic, 28 per cent | cwt. | 3.38 @ | 3.63 |
| Cresylic, 97% | gal. | .73 @ | .78 |
| 95% | | .65 @ | .70 |
| Muriatic, 20% | cwt. | .90 @ | 1.00 |
| Nitric, 36 degrees | cwt. | 4.25 @ | 4.50 |
| Sulphuric, 60 degrees | ton | 10.00 @ | 12.00 |
| 66 degrees | ton | 14.00 @ | 16.00 |
| Tartaric, crystals | lb. | .30 @ | — |

### *Alkalies*

| | | | |
|---|---|---|---|
| Caustic soda, 76% | cwt. | 3.76 @ | 3.91 |
| Soda ash, 58% | cwt. | 2.04 @ | 2.19 |

### *Oils*

| | | | |
|---|---|---|---|
| Castor, No. 3, bbls. | lb. | .15 @ | — |
| Chinawood, bbls. | lb. | .17½ @ | .18¼ |
| Corn, crude, bbls. | lb. | .10 @ | .11 |
| refined | lb. | .12½ @ | — |
| Cottonseed, crude | | 8.12 @ | 8.37 |
| Glycerine, | lb. | .16½ @ | .17 |
| Linseed, domestic | gal. | .84 @ | .98 |
| Palm, Niger | lb. | .07 @ | — |
| Lagos | lb. | .07¾ @ | .08 |
| Peanut,domestic,crude | lb. | .13 @ | — |
| Petroleum, amber | lb. | .05⅞ @ | — |
| dark, amber | lb. | .05⅛ @ | — |
| Pine, steam distilled | lb. | .65 @ | .70 |
| Rapeseed, refined | gal. | .92 @ | — |
| blown | gal. | 1.05 @ | — |
| Rosin, first rectified | gal. | .42 @ | .43 |
| second refined | gal. | .46 @ | .48 |
| Soya Bean | | .10¼ @ | .12½ |
| Tar, commercial | gal. | .50 @ | — |

### *Resins and Pitches*

| | | | |
|---|---|---|---|
| Cumar resin, hard | lb. | .09 @ | .10 |
| soft | lb. | .09 @ | .10 |
| Parra M.R. | lb. | .06 @ | .07 |
| Tar Retort | bbl. | 11.00 @ | — |
| kiln burned | bbl. | 11.00 @ | — |
| Pitch, Burgundy | lb. | .05 @ | .06 |
| coal tar | gal. | .06 @ | .08 |
| pine | bbl. | 6.50 @ | — |
| Rosin, grade K | bbl. | 5.70 @ | 5.75 |
| Shellac, fine orange | lb. | .61 @ | .62 |

### *Solvents*

| | | | |
|---|---|---|---|
| Acetone, drums | lb. | .17 @ | 18 |
| Alcohol, denatured, No. 1 bbls. | gal. | .52½ @ | .56½ |
| Benzol, 90% | gal. | .23 @ | .30 |
| pure | | .24 @ | .31 |
| Carbon bisulphide | lb. | .06 @ | .07 |
| tetrachloride | lb. | .08½ @ | .09½ |
| Dimethylaniline | lb. | .39 @ | .41 |
| Motor gasoline, steel bbls. | gal. | .20 @ | — |
| Naptha, V. M. & P. | gal. | .18 @ | — |
| Toluene | gal. | .26 @ | .31 |
| Turpentine, spirits | gal. | 1.01 @ | — |
| wood | gal. | .90 @ | — |

### *Waxes*

| | | | |
|---|---|---|---|
| Bayberry | lb. | .20 @ | .22 |
| Beeswax | lb. | .40 @ | .42 |
| Carnauba, No. 1 | lb. | .38 @ | .39 |
| Ceresin, white | lb. | .10 @ | .11 |
| Montan, crude | lb. | .05½ @ | .06 |
| Ozokerite, black | lb. | .23 @ | .24 |
| green | lb. | .27 @ | .28 |
| Paraffine | lb. | .04¼ @ | .05½ |
| Phenol | lb. | 25 @ | .26 |
| Sweet wax | lb. | .10 @ | .12 |

## SUBSTITUTES

| | | | |
|---|---|---|---|
| Black | lb. | .09 @ | .14 |
| White | lb. | .10 @ | .16 |
| Brown | lb. | .10 @ | .15 |
| Brown factice | lb. | .09½ @ | .15 |
| White factice | lb. | .08½ @ | .15 |

## VULCANIZING INGREDIENTS

| | | | |
|---|---|---|---|
| Black hyposulphite | lb. | .17 @ | .20 |
| Sulphur Chloride (drums) | lb. | .06 @ | .08 |
| Sulphur flour Commercial bags, | cwt. | 1.35 @ | — |
| " bbls. | cwt. | 1.70 @ | — |
| Superfine, bags, | cwt. | 2.00 @ | — |
| " bbls. | cwt. | 2.40 @ | — |
| 100% pure, refined, bags | cwt. | 2.35 @ | — |
| bbls. | cwt. | 2.60 @ | — |

# Crude Rubber

NEW YORK, April 1, 1924

Crude rubber has been quiet for the last two weeks with a hand-to-mouth buying policy in evidence and few buyers in the market. On the 17th an exciting and fluctuating session brought prices down a full 1½ cents on spot ribbed smoked sheets following fluctuating market in London and Singapore. But the next day it worked back to its former position and remained firm for several days, being characterized by caution on the part of buyers lest another London cable upset prices. Then came a period of uneasiness caused by the report that a large Singapore firm was in difficulties. Prices dropped ½ a cent on spot. A firmer tendency and more interest was shown toward the close of the market on the day in question.

On the 22nd news from abroad on restriction, especially the information that the Stevenson committee had been requested by the London trade to cut the exportable percentage to 50 per cent, caused holders to regard their rubber with greater interest. The market stepped forward to a spot asking basis of 22⅛ cents for ribbed smoked sheets. The market remained firm until the 26th when April, May and June lost a cent a pound, although London furnished no basis for such a loss. A problematical statistical position was the cause of a great deal of uncertainty the following day when sellers' asking prices were quoted over a wide range. An accurate check-up of the amounts afloat was not possible owing to lack of information on the positions of the steamers. Traders experienced difficulty in working the market with the result that buyers were given so many varying sets of prices that they withdrew.

With the spot position practically out of the way speculators on the 28th turned their attention to May, June and July. Quantities of these grades changed hands at slightly lower levels. Little change was noticeable on the following day.

Toward the close of the period being reviewed the market took on a firm tone and higher prices in the face of disconcerting news, both foreign and domestic A cautious tendency continued to influence buyers. Shipments from Malayan ports for the first half of March were reported at 13,104 tons, which report bore out the belief of some traders that the spot position during May and June would be uncertain. Other grades were quiet and practically unchanged in quotations.

A pessimistic feeling was apparent in some quarters due to the fact that production of tires has not been up to former years. It is thought that balloon tires have a great deal to do with this attitude on the part of rubber manufacturers. At the close of the market, on advices from London, practically all grades of Plantations advanced ¼ cent, and the market closed firm. Quotations are as follows:

## NEW YORK MARKET

| | | | |
|---|---|---|---|
| ***Plantations***— | | | |
| Ribbed Smoked Sheets: | | | |
| Spot | .22⅜ | @ | — |
| May | .22⅜ | @ | — |
| June | .23 | @ | — |
| July-September | .23¼ | @ | — |
| First Latex, crepe, spot | .22¾ | @ | — |
| Amber Crepe No. 1, spot | .22½ | @ | — |
| " " No. 2, | .22¼ | @ | — |
| " " No. 3, | .21⅞ | @ | — |
| " " No. 4, | .21¾ | @ | — |
| Brown Crepe, Rolled | .22¼ | @ | — |
| " " Clean, thin | .22⅛ | @ | — |
| " " Specky | .22 | @ | — |
| Scrap, Colombo No. 1 | .19⅛ | @ | — |
| ***Pontianac***— | | | |
| Prime Pressed | .13 | @ | — |
| Palembang | .13½ | @ | — |
| Bangermassin | .09 | @ | — |
| Sarawak | .07¾ | @ | — |
| ***Paras***— | | | |
| Up-river Fine | .18½ | @ | — |
| " Medium | .17¼ | @ | — |
| " Coarse | .16 | @ | — |
| Islands, fine | .16½ | @ | — |
| " medium | .13½ | @ | — |
| " coarse | .11 | @ | — |
| Cameta | .11 | @ | — |
| Madeira Fine | .19½ | @ | — |
| Acre Bolivian, fine | .18½ | @ | — |
| Cut Beni Bolivian, fine | .19½ | @ | — |
| Tapajos, fine | .16½ | @ | — |
| Xingu Ball | .15 | @ | — |
| ***Caucho Ball***— | | | |
| Upper, shipment | .16 | @ | — |
| ***Centrals***— | | | |
| Central, scrap, prime | .16 | @ | — |
| Corinto, scrap | .16 | @ | — |
| Esmeralda, sausage | .16¼ | @ | — |
| Guayule, w and d. | .24 | @ | — |
| ***Africans***— | | | |
| Benezuela, No. 1 | nominal | | |
| " No. 2 | nominal | | |
| Congo, upper, black | .22 | @ | nom. |
| " " red | .21½ | @ | — |
| ***Balata***— | | | |
| Black, Columbia | .58 | @ | — |
| " Cuidad | .66 | @ | — |
| Surinam, sheet | .73 | @ | — |
| ***Gutta Percha***— | | | |
| Siak | .17 | @ | .17½ |
| Red Macassar | 2.75 | @ | 3.00 |
| ***Chicle***— | | | |
| Mexican, Yucatan | .67 | @ | — |

## LONDON MARKET

| | |
|---|---|
| Standard Ribbed Smoked Sheets— | |
| Spot | 12½d |
| May-June | 12¾ |
| July-Sept. | 13⅛ |
| Oct.-Dec. | 13⅜ |

## SINGAPORE MARKET

| | |
|---|---|
| Standard Ribbed Smoked Sheets— | |
| Spot | 11⅞d |
| May-June | 12⅛ |
| July-Sept. | 12⅜ |

# Reclaimed Rubber

NEW YORK, April 1, 1924

Since our last report reclaimers have stated that the demand for reclaims has fallen off appreciably, the manufacturers seemingly being content to buy in hand-to-mouth fashion. Orders for small lots to fill current needs only are reported. The rubber industry as a whole has let down in production; most of the manufacturing now being done is for current needs rather than for inventory. Some reclaims were easier in tone with mechanicals, boots and shoes, floating tube and friction stock being quoted about half a cent lower than previously. Prices are as follows:

| | | | |
|---|---|---|---|
| Floating Tube | .13½ | @ | .14 |
| Friction | .22 | @ | .23 |
| Boots and Shoes (unwashed) | .09½ | @ | .10 |
| Boots and Shoes (washed) | .12½ | @ | .13 |
| Mechanical | .09 | @ | .09½ |
| Hose | .09½ | @ | .10 |
| Tires, truck | .08 | @ | .08½ |
| Tires, auto, black | .08¾ | @ | .09 |
| Black (washed) | .11 | @ | .11¼ |
| White | .15 | @ | .15½ |
| Dark Gray | .09¾ | @ | .10¼ |
| Light Gray | .11 | @ | .11¼ |

# Chemicals

*Sulphur*—Good business is reported in sulphur. Compared with a corresponding period last year, the volume being done by many factors and dealers for January, February and March is much greater. Although a decided drop was experienced in April, 1923, a repetition of this condition is not expected this year.

*Red Oxides*—Fairly active with a good demand reported. Prices are firm, at from .08 to .12 cents a pound.

*Organic Accelerators*—A good demand is reported for accelerators, especially hexamethylene and diphenylguanidine, with prices firm. Volume of business being done is about normal.

*Whites*—White colors are fairly steady, although not as active as was expected. The volume of business being done in zinc oxides compares favorably with that done in February, it is reported by one of the large factors.

*Carbon Black*—Restrictive legislation in Louisiana and other southern natural gas states has had a tendency to increase prices. Inquiries from rubber manufacturers are numerous with an active and continued demand for carbon black reported by several makers.

*Lithopone*—It is reported that several large manufacturers are running several weeks behind orders. Certain factors are endeavoring to advance the price but it is felt by the larger distributors that they will not be successful in this.

*Blanc Fixe*—A fair demand is reported; prices are holding firm. Volume of business being done is reported to be about normal.

# Scrap Rubber

NEW YORK, April 1, 1924

During the past fortnight the prices of several important grades of scrap rubber showed further declines. Few buyers are reported in the market and practically the only business being done is in old contracts. One large dealer expects the present dull condition of this market to continue until the fall, as March is considered the peak month in many branches of the rubber industry, particularly the automotive division.

Standard white auto declined $2.00 a ton since our last report. Mixed auto is being quoted $10 @ $11. a ton which compares with $11 @ $12 as of March 15. Untrimmed arctics also showed a slight decline. Prices are nominally as follows:

| | | | |
|---|---|---|---|
| Auto tire peelings | .00⅝ | @ | .00¾ |
| Standard White auto ....ton | 14.00 | @ | 15.00 |
| Mixed auto ....ton | 10.00 | @ | 11.00 |
| Bicycle tires ....ton | 7.00 | @ | 8.00 |
| Clean solid truck tires | .00¾ | @ | .00⅞ |
| Boots and shoes | .02¼ | @ | .02⅜ |
| Arctics, untrimmed | .01 | @ | .01⅛ |
| Arctics, trimmed | .01⅜ | @ | .01½ |
| Inner tubes, No. 1 | .03⅛ | @ | .03⅝ |
| Inner tubes, compounded | .02 | @ | .02⅛ |
| Inner tubes, red | .01⅞ | @ | .02 |
| Battery jars, clean hard rubber | .01 | @ | .01⅛ |
| Air Brake Hose ....ton | 10.00 | @ | 11.00 |
| Rubber Hose ....ton | 7.00 | @ | 8.00 |
| Red packing | .01 | @ | — |

# Trade Marks

MARCH 18, 1924

*(Subject to opposition within 30 days of above date)*

DESIGN (consisting of two triangles with circular sides, the inner triangle containing the word "Cycline"; the words "rubber service laboratories" being contained between the two triangles"—No. 177,625. The Rubber Service Laboratories Co., Akron, Ohio. Compounded mixture of animal, vegetable, or mineral oils or a mixture thereof, and used as a softener in the curing of rubber articles.

KOH-I-NOOR—No. 189,792. Kohinoor Bleistiftfanrik L. & C. Hardtmuth in Budweis, Budweis, Czechoslovakia. India-rubber pencil erasers, India-rubber ink erasers, India-rubber bands and rings.

*(Not subject to opposition)*

KELSO—No. 182,976. Kelso Manufacturing Co., Detroit, Mich. Tire gauges.

DADDY BROWNELL—No. 174,503. The Wildman Rubber Co., Bay City, Mich. Pneumatic automobile tires and rubber tire tubes.

MARCH 25, 1924

*(Subject to opposition within 30 days of above date)*

KIDDIE-TOWN—No. 156,066. Kiddie-Town Products, Inc., Seneca Falls, N. Y., assignor to E. M. Trimble Mfg. Co., Rochester, N. Y., a corporation of New York. Infants' folding bathtubs and combination bath cabinets and tubs made wholly of wood and rubber cloth.

BABY BATHINETTE—No. 156,068. Kiddie-Town Products, Inc., Seneca Falls, N. Y., assignor to E. M. Trimble Mfg. Co., Rochester, N. Y., a corporation of New York. Infants' folding bathtubs and combination bath cabinets and tubs made wholly of wood and rubber cloth.

INDIAN RED (and face of an Indian)—No. 185,080. The B. F. Goodrich Company, New York, N. Y. Belting made of fabric and rubber, and sheet packing containing rubber.

PANTHER—No. 187,531. Panther Rubber Manufacturing Company, Stoughton, Mass. Rubber heels and soles.

PANTHER—No. 187,532. Panther Rubber Manufacturing Company, Stoughton, Mass. Rubber heels and soles.

RAWHIDE—No. 187,630. Abraham I. Levin, doing business as Rawhide Products Distributing Co., Kenilworth, N. J. Rubber tires, inner tubes, tire flaps, blow-out and tube patches.

UNIT—No. 187,889. United Rubber & Leather Co., Boston, Mass. Boots and shoes composed of rubber and of ruber and leather, and for heels and soles of rubber alone and of rubber combined with fibrous material.

GLADFLEX—No. 188,960. Gladding Dry Goods Co., Providence, R. I. Boots, shoes, slippers, overshoes, and rubbers made wholly or in part of leather, rubber, or fabric.

*(Not subject to opposition)*

INDESTRUCTIBLE—No. 181,840. New York Belting & Packing Co., New York, N. Y. Belting, hose, and packing made of rubber and fabric.

# Rubber Patents

GRANTED MARCH 18, 1924

1,486,865. Cushioned Vehicle Wheel. William More Decker, Buffalo, N. Y.

1,486,959. Collapsible Tire Core. Archer H. Harris, Barberton, Ohio.

1,487,034. Appliance for the Manufacture of Pneumatic Tires. Thomas Sloper, Devizes, England.

1,487,035. Apparatus for use in the Manufacture of Rubber Goods. Thomas Sloper, Devizes, England.

1,487,036. Apparatus for the use in the Manufacture of Rubber Goods. Thomas Sloper, Devizes, England.

1,487,165. Tire. Elmer C. Jacobson, Roy Washington.

1,487,261. Pneumatic Tire Flap. Luther Oppenheimer, El Cajon, Calif.

1,487,384. Pneumatic Tire. Alexander Albert Holle, Paddington, London, England.

1,487,404. Demountable Rim. George Sivkovitz, Pontiac, Michigan.

1,487,424. Container. John M. Ahlgren, Indianapolis, Indiana. Assignor to Ahlbell Battery Container Corporation, Waukegan, Ill., a Corporation of Illinois.

1,487,621. Scrubbing Device. Joseph Thomas, Aberdeen, Wash.

1,487,623. Tire Protector. Morris Thompson, Nyack, N. Y.

1,487,696. Vulcanizer Connection. Clifford D. Smith, Akron, Ohio, assignor to The Firestone Tire & Rubber Company, Akron, Ohio, a Corporation of Ohio.

GRANTED MARCH 25, 1924

1,487,831. Tire-Inflating Connection for Wheels. William Barber, Brooklyn, N. Y.

1,487,835. Tire Pump Robert H. Botts, Parker, Ariz.

1,487,851. Inflation Device. William P. Hammond, Passaic and Theodore A. Hammond, Rutherford, N. J. Assignors to A. Schrader's Sons, Inc., Brooklyn, N. Y. a Corporation of New York.

1,487,880. Process for the Vulcanization of Caoutchouc. Stanley John Peachey, Davenport, Stockport, England.

1,487,920. Emergency Tire. Lawrence J. Dawson, Kansas City, Mo.

1,488,004. Air Container. Arthur Grover Fitzgerald, Brookline, Mass. Assignor to Ira J. Webster, Haverhill, Mass.

1,488,048. Manufacture of Weftless Fabric. Ernest Hopkinson, New York, N. Y.

1,488,265. Inflatable Cover for Lamps and the like. Ichiro N. Matsuo, Chicago, Ill.

1,488,343. Method of Making Tire Casings. Harry A. Hoffman, Akron, Ohio, assignor to the B. F. Goodrich Company, New York, N. Y., a Corporation of N. Y.

1,488,360. Demountable Rim to carry Pneumatic Tires upon Vehcile Wheels. Jesse M. Lozier, Humboldt, Ill.

1,488,409. Method of and Apparatus for Curing Inner Tubes. Will C. State, Akron, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, A Corporation of Ohio.

1,488,426. Tire Alarm. Charles A. Baker, Great Falls, Mont.

# New Incorporations

CALIFORNIA

Burton-Wade Rubber Co., Vernon, Cal. Capital stock, $20,000.

COLORADO

Mid-West Rubber Mfg. Co. $350,000. Incorporators: Charles W. Clark, H. W. Danforth and A. S. McCormack. Principal office, Denver, Col.

CONNECTICUT

Connecticut Tire & Rubber Co., Inc. $50,000. Incorporators: Abraham Silverstein, Harry L. Becker and Harold Zinman. Principal office, Hartford, Conn.

DELAWARE

Reinforced Rubber Co., Inc., Wilmington. To deal in rubber, gutta percha, etc. Capital $1,200,000.

INDIANA

The Capital Tire & Service Co., Indianapolis. Cap. $13,000. Garage and auto accessories. Directors, H. R. Russon, A. L. Barber, H. P. Hawkins.

Independent Shoe & Rubber Co., Fort Wayne. To manufacture and deal in footwear. (Outgrowth of Independent Rubber Co., 121 East Columbia St.) Directors, A. Anspach, Isaac M. Kann and Sol Kann.

IOWA

Jones-Barr Motor Co., to buy, sell and deal in rubber goods, tires, etc. $25,000. Incorporators: Harry A. Jones and Robert Barr. Principal office, Cherokee, Iowa.

MASSACHUSETTS

The Rubber Latex Research Corp., Boston. Capital $100,000.

NEW JERSEY

Rubber Products Sales Co., 40 Hamilton St., Paterson. To deal in rubber articles. Capital, $100,000.

NEW YORK

Reinforced Rubber Flooring Corp., Syracuse, N. Y. 1,000 shares common stock, no par value. Incorporators: W. R. Stone, S. Skinner, R. L. Caldwell. Principal office: Syracuse, N. Y.

Beaney Rubber Corp., Poughkeepsie. N. Y. office, 144 West 54th St. Capital, $75,000. Incorporators, W. Beaney, President; R. H. Styles, Vice-President. To manufacture flaps and accessories.

LeBrecht Corp., Manhattan. 100 shares common stock, no par value. Incorporators, E. J. Noyes, H. Hicks, G. P. Lloyd. To manufacture rubber goods and tires.

NORTH CAROLINA

Clover Tire Manufacturing Company, to manufacture and sell automobile tires, tubes and accessories; authorized capital $25,000. Incorporators, H. H. Memory, Vance Skipper, I. L. McGill, J. W. Sellers.

OHIO

Royal Rubber Co. $10,000. Incorporators: J. H. Costello, Etta Hamlen, Robert Guinther, Regina Brannan and J. H. Huber. Principal office: Barberton, Ohio.

Elyria National Rubber Heel Co. Changed Stock from $225,000 to $4,500. Principal office: Elyria, Ohio.

Multityping & Rubber Co. $20,000. Incorporators: Theodore A. Myers and Wallace Tomey. Principal office, Toledo, Ohio.

Multyplex Packing & Rubber Co. $20,000. Incorporators: Theodore A. Myers and Wallace Tomey. Principal office, 6 So. St. Clair St., Toledo, Ohio.

Scioto Rubber Co., Delaware, Ohio. Capital, $50,000. To manufacture punctureless inner tubes. President, W. A. Kline.

Mefford Tire & Supply Co., Lima. Capital $15,000; Inc. E. W. Finkle, L. W. Baker.

OREGON

Cummings Tire Co., Inc., Portland. Capital, $18,000. Inc. E. H. Cummings, M. T. Cummings, W. C. Mason.

TENNESSEE

Lambert Trublproof Tire Co., Inc. $5,000. Incorporators: A. B. Wallace, W. T. Wrenn, C. R. Wallace, J. G. Stephenson and T. T. McCarley. Principal office: Nashville, Tenn.

TEXAS

McGlashon Tire Co. $6,000. Incorporators: S. J. McGlashon, Della A. McGlashon and G. D. Shook. Principal office: Waco, Texas.

WEST VIRGINIA

Valley Rubber Co. $100,000. Incorporators: Thomas Mulholland, Joseph B. Doyle, Katherine M. Doyle, Harry E. Snider, Herman L. Arbenz. Principal office: Wheeling, W. Va.

Acme Rubber & Flooring Co., Inc. $2,500 to $25,000. Incorporators: L. P. Moore, president; J. Irving Bear, secretary; and A. G. Robertson. Principal office: Richmond, W. Va.

WISCONSIN

Willard Rubber Products Co. $100,000. 1000 shares. Principal office: San Diego, Cal.

CHARTER SURRENDER

Poss Tire Co., Chattanooga, Tenn.

# Cotton Markets

*(Continued from Page 21)*

CORD FABRICS

| | | | |
|---|---|---|---|
| Combed Sakellarides | | Nominal | |
| Combed Peeler | lb. | Nominal | |
| Carded Peeler | lb. | .55 @ | .56 |
| Combed Egyptian uppers | lb. | Nominal | |
| Carded Egyptian uppers | lb. | .62 @ | .63 |

SQUARE WOVEN

| | | | |
|---|---|---|---|
| 17¼-ounce Egyptian uppers, combed | lb. | Nominal | |
| 17¼-ounce Egyptian uppers, carded | lb. | .60 @ | .62 |
| 17¼-ounce Sakellarides, combed | lb. | Nominal | |
| 17¼-ounce Peeler, combed | lb. | Nominal | |
| 17¼-ounce Peeler, carded | lb. | .54 @ | .56 |

*Ducks*—Little business was reported at the beginning of the period being reviewed. Buying was restricted until March 24 when a break in the raw cotton market caused several heavy buyers to withdraw orders they were contemplating. This period was followed by one of cautious buying and for a few days the market remained quiet with prices somewhat elastic.

*Burlaps*—The market for burlaps has been irregular and characterized by sharp advances in shipment prices and spots. A strong speculative tendency has been manifested by many traders with the conservative element skeptical of the continued maintenance of higher prices.

SHEETINGS

| | | | |
|---|---|---|---|
| 40-inch 2.50-yard | yd. | .16½ @ | — |
| 40-inch 2.85-yard | yd. | .14 @ | — |
| 40-inch 3.15-yard | yd. | .14¾ @ | — |
| 40-inch 3.60-yard | yd. | .12¼ @ | — |
| 40-inch 3.75-yard | yd. | .11 @ | — |
| 40-inch 4.25-yard | yd. | .09½ @ | .09¾ |

DUCKS

| | | | |
|---|---|---|---|
| Belting | lb. | .48 @ | .50 |
| Hose | lb. | .48 @ | .50 |
| Enameling | lb. | .48 @ | .54 |
| Shoe Ducks | lb. | .47 @ | .50 |
| Single filling | lb. | .22½ @ | .24 |
| Double filling | lb. | .24½ @ | .26 |

BURLAPS
(Carload Lots)

| | | | |
|---|---|---|---|
| 7½-ounce 40-inch | | 6.10 @ | 6.15 |
| 8 -ounce 40-inch | | 6.15 @ | 6.20 |
| 10 -ounce 40-inch | | 7.90 @ | 7.95 |
| 10½-ounce 40-inch | | 7.95 @ | 8.00 |

DRILLS

| | | | |
|---|---|---|---|
| 37-inch 2.75-yard | yd. | .14 @ | .14¼ |
| 37-inch 3.00-yard | yd. | .13½ @ | — |
| 37-inch 3.25-yard | yd. | .12½ @ | .12½ |
| 37-inch 3.50-yard | yd. | .12 @ | — |
| 37-inch 3.95-yard | yd. | .10¼ @ | — |

OSNABURGS

| | | | |
|---|---|---|---|
| 30-inch 7-ounce | | .14¼ @ | .14½ |
| 40-inch 7-ounce | | .16½ @ | — |